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FINAL
ENVIRONMENTAL IMPACT REPORT
RESPONSE TO COMMENTS

LAND USE PLANNING POLICY WITHIN
THE 100-YEAR FLOOD PLAIN IN THE
CITY AND COUNTY OF SACRAMENTO




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1. INTRODUCTION

1. INTRODUCTION

This document contains the public comments, received during the public review period from September 18, 1989 to November 1, 1989, on the Draft Environmental Impact Report (DEIR) for the proposed Land Use Policy Within the 100-Year Flood Plain in the City and County of Sacramento, and written responses to those comments.

Comments and responses are grouped by letter for all written comments. As the subject matter of one letter may overlap that of other letters, the reader must occasionally refer to more than one group of comments and responses to review all information on a given subject. Where this occurs, cross-references are provided.

Pursuant to Section 15164 of the CEQA Guidelines, this document includes an Addendum to the EIR. The Addendum contains information pertinent to the EIR conclusions which has been developed since publication of the Draft EIR.

These comments and responses, together with the Draft EIR and the Addendum included in this document, will constitute the Final EIR for the proposed project.

2. ADDENDUM TO THE EIR



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**Re: Addendum to the Environmental Impact Report Relating to
Consistency With the City General Plan Policy on Flooding**

Dear Ms. Wendt:

This addendum was prepared by the office of the City Attorney. It evaluates the consistency of the proposed land use planning policy with the City's General Plan policy on flooding and states the view that the Draft Environmental Impact Report (DEIR) erred in its interpretation of the intent of the language of the General Plan. The addendum further suggests certain modifications designed to eliminate perceived shortcomings in the policy and concludes that adoption of the policy as modified would not be inconsistent with the General Plan.

Intent of the General Plan Policy on Flooding

The City General Plan states that the City will "prohibit development of areas subject to unreasonable risk of flooding unless measures can be implemented to eliminate or reduce the risk of flooding." The DEIR states, on page 78, that the proposed policy is not consistent with this language. Although the DEIR does not expressly say so, it assumes that any area with less than 100-year flood protection is by definition subject to an unreasonable risk of flooding. Since the proposed policy would permit unrestricted development in areas of the 100-year floodplain, the DEIR concludes that the policy is inconsistent with the General Plan. As a mitigation measure, the DEIR recommends amendment of the General Plan.

The conclusion that development is to be prohibited under the General Plan in all areas with less than 100-year flood protection is in error. The General Plan policy on flooding was never intended to be interpreted in this manner. This portion of the Plan was approved in January 1988. The City was aware at that time that the size of the 100-year floodplain was likely to increase, though it was not clear by how much. The language prohibiting development in areas subject to an "unreasonable risk" of flooding was included in the General Plan so that new projects could be evaluated on an area-by-area or case-by-case basis at a later time. This language was clearly designed to give the City Council the flexibility to permit development under appropriate circumstances in areas determined to have less than 100-year protection.¹

Special Legislation

The City's flexible approach to permitting development in areas of the newly identified 100-year floodplain is consistent with current Federal policy. For example, the special legislation enacted by Congress as part of the McKinney Homeless Assistance Act of 1988 provides, in part, that:

[For no more] than four years after the date of enactment of this Act, the provisions of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 shall apply on the basis of flood map elevation determinations made by the Director of the Federal Emergency Management Agency in effect as of the date of enactment of this Act to the following areas: (1) the floodplain areas within Sutter and Sacramento Counties, California, (collectively known as the 'Natomas Area') which are bounded by the Sacramento River, the American River, the Natomas cross canal, and the floodplain of the Natomas east main drainage canal; (2) the floodplains within Sacramento County Drycreek, Arcade Creek and Morrison Creek to the extent these creeks are effected by the American and Sacramento Rivers, the American River and the Sacramento River upstream of the City of Freeport, California. . . .

This legislation restrains application of the 100-year standard in areas of the Sacramento community which were formerly thought to enjoy at least 100-year flood

¹Conversation with Rusty Selix, Consultant to the City Department of Planning and Community Development on Preparation of the General Plan, January 1990.

protection but which now may be deemed to lie within the 100-year floodplain. As a result, the City and County are given authority to impose on new development in these areas such elevation and other requirements as these local jurisdictions may deem necessary given their knowledge of local conditions.² The Special Legislation thus creates the kind of administrative flexibility anticipated by the language of the City's General Plan.

Brooks Amendment

Finally, the Brooks Amendment to the National Flood Insurance Act permits development in areas lacking 100-year flood protection where it is determined that the affected community is making adequate progress toward the completion of a flood protection system designed to afford 100-year protection. Section 1307(e) of this Act provides that:

Any community that has made adequate progress, acceptable to the Director, on the construction of the flood protection system which will afford flood protection for the 100-year frequency flood as determined by the Director shall be eligible for flood insurance...at premium rates not exceeding those which would be applicable...if such flood protection system had been completed.

The Brooks Amendment allows the Director of FEMA to find that adequate progress has been made when at least fifty percent of the community's 100-year flood protection system has been constructed and the funding necessary to complete the system has been one hundred percent authorized, sixty percent appropriated and fifty percent expended.

This adequate progress standard thus creates flexibility in the administration of the National Flood Insurance Program. It permits communities to proceed with development in areas with less than 100-year flood protection without having to comply with the elevation and insurance requirements otherwise applicable to areas lying within the 100-year floodplain. It may be inferred that where the adequate progress criteria are satisfied, the risk of flooding may be deemed acceptable, and development may be allowed to proceed without imposition of all of the measures normally required to eliminate or reduce this risk.

²FEMA letter to Congressmen Fazio and Matsui dated January 3, 1989.

City Council Determination

It is ultimately up to the City Council to determine whether or not the proposed policy is consistent with the General Plan policy prohibiting development "in areas subject to an unreasonable risk of flooding." This determination will inevitably reflect the fact that Sacramento's location at the confluence of two major rivers creates an unavoidable risk of flooding. Even with 100-year protection, thousands of residents of this community must live with the knowledge that there is approximately a 25 percent chance that they could suffer the complete loss of their home due to flooding sometime during the 30-year term of a normal home mortgage.³ The Council must decide whether or not an incremental increase in this existing level of risk is unreasonable in light of the demands of continuing the orderly development of the community.

In this regard, the Council's determination may take into account the likelihood of flooding in Sacramento based on the history of flooding in this area; the extent to which existing floodfighting and evacuation measures can reduce the potential for property damage and loss of life in the event such flooding occurs; and the character and timing of any foreseeable augmentation of existing levels of protection. Based on these factors, the City should separately evaluate the risk of flooding in each of the following four areas of the City: Natomas, North Sacramento, the Pocket and the remaining areas of the City which lie within the 100-year flood plain. In each of these areas, the Council's evaluation should distinguish the potential source of flooding (Sacramento versus American River), the potential damage due to flooding (personal injury versus property damage) and the nature of the development contemplated (residential versus nonresidential).

Flooding From The American River

Almost all areas of the City are subject to flooding from the American River. The Pocket and the areas of the City south of the River are subject to inundation in the event the American overflows its levees. The flood event causing this overflow could also reach Natomas and North Sacramento through an overtopping of the Natomas East Main Drainage Canal (NEMDC).

Risk To Property

The threat to property along the American River may be measured by the magnitude and likelihood of the flood event required to produce damage. The DEIR

³All estimates of risk percentages contained in this addendum are derived from the formula set forth in Appendix I of the DEIR.

assumes that flooding could occur in connection with a 63-year or greater event. The DEIR further assumes that 100-year protection on the American will not be attained until 1997. Therefore, the DEIR concludes that between 1989 and 1997 there would be a 13.4% chance that property could be damaged due to flooding. This is a worst case projection developed for CEQA purposes. In fact, the history of flooding on the American River and current data from the U.S. Army Corps of Engineers (USCOE) on the attainment of 100-year protection suggest that the actual risk of flood-related property damage may be less severe.

Past history suggests that the American River levees may accommodate flows in excess of a 63-year event without failure. That event assumes a flow of 115,000 cfs. In 1986, the levees withstood an historic flow of 132,000 cfs. during what is now thought to have been a 70-year event.⁴ This flow did encroach into the design freeboard and did cause erosion. However, the USCOE and the American River Flood Control District (ARFCD) have made 2.5 million dollars worth of repairs to the levee since that time. These repairs have occurred at three locations: Campus Commons near Sacramento State University, River Park, and Discovery Park near the mouth of the American River. At each site the levee has been reconstructed and placed in probably a stronger condition than it was in 1986.⁵ Assuming the local, State and Federal jurisdictions charged with fighting floods along the American can carry out their work at least as effectively as they did in 1986, the current level of protection may accommodate at least the record flow which occurred in 1986. Since this record flow is thought to have been a 70-year event, the chance of a similar occurrence is approximately 1.43 percent per year.

As explained in the DEIR, 100-year protection along the American River may be obtained by increasing current upstream storage capacity initially through the interim reoperation of Folsom Dam and ultimately through the construction of a new upstream storage facility. While construction of this new facility may be nearly a decade away, reoperation of Folsom may occur sooner than the DEIR projection. In fact, the USCOE information necessary to permit authorization of reoperation will be available in the summer of 1990. If this information is acted upon expeditiously, reoperation could be achieved by 1991 or 1992.⁶ Assuming reoperation occurs by the end of 1992, the risk of property damage due to a flood on the American River during the interim may be no

⁴USCOE, Information Paper on Alternatives, December 1989, p. 6.

⁵Conversation with Ron Smith, District Engineer, American River Flood Control District, December 1989.

⁶Meeting with USCOE Representatives, December 1989.

more than 4.22 percent. By comparison, even if 100-year protection existed today, the risk of flooding over the next three years would be 2.97 percent. Accordingly, the existing level of protection may increase this risk by only 1.25 percent. The City Council could determine that this increase is not unreasonable for purposes of the General Plan policy on flooding.

Public Safety

The DEIR notes that, unlike the Sacramento River, the levees along the American are generally thought to be stable. Furthermore, by virtue of the size and proximity of Folsom Dam, flows in the American can be more readily monitored. As a result, there is little likelihood of a catastrophic loss of life due to a levee break without warning. Rather, the potential for flooding on the American can be anticipated in advance, thus providing at least the two to six-hours' notice which the DEIR projects as necessary to carry out an effective evacuation.

As discussed above, the levee system along the American River withstood a 70-year flow in 1986. Repairs to the levee since that time have put the levee in as good if not better condition than it was prior to the 1986 flood. Therefore, there is approximately a 1.43 percent chance that flows of a magnitude sufficient to threaten life could occur in any given year. Assuming Folsom Dam is reoperated by 1992, there may be no more than a 4.22 percent chance that a life threatening event will occur on the river prior to the attainment of 100-year protection. Thus, the existing level of protection may add only 1.25 percent to the risk that would otherwise exist with 100-year protection. The City Council could determine, therefore, that permitting unrestricted development in the American River floodplain does not pose an unreasonable risk to life and is not inconsistent with the General Plan policy on flooding.

Natomas East Main Drainage Canal

According to the DEIR, flooding along the NEMDC poses a threat to life and property in the North Sacramento area east of the canal and in the Natomas area to the west. Such flooding could be triggered either by the backwater effects of flows out the American River or by uncontrolled flows out of Arcade Creek and Dry Creek or by a combination of flows from these sources. For purposes of determining the economic feasibility of constructing improvements along the NEMDC, the USCOE has determined that this levee can withstand flows of up to a 60-year frequency, despite the fact that a 60-year event would encroach halfway into the three feet of design freeboard provided along

the NEMDC.⁷ During 1986, this system accommodated record flows estimated to constitute a 70-year event.⁸ During this event, water encroached well into the design freeboard and reached within a foot of the crown of the levee without triggering a failure. The stability of the NEMDC even in the face of these very high flows is believed to result from the dense composition and solidity of the soil used to construct the levee and the fact that flows in the canal are slow moving.⁹

Since 1986, Reclamation District 1000 (RD 1000) has made over one hundred thousand dollars worth of repairs and improvements along the NEMDC. These have included regrading and resurfacing the road on the crown of the west side of the levee and raising a low spot in the levee near the San Juan Bridge. This low spot is believed to be the area where the water level generated in 1986 reached to within one foot of the top of the levee. As a result of RD 1000's repairs and improvements, it is now believed that there may be a minimum of two feet of freeboard above the level reached in 1986.¹⁰ This suggests that the NEMDC may be able to handle flows in excess of the record 70-year level which occurred in 1986.

Reoperation of Folsom Dam will permit increased control over flows in the American River. However, this will not eliminate the risk of flooding along the NEMDC because backwater effects will continue to push water into the canal even during very frequent storm events along the American.¹¹ These effects combined with uncontrolled flows into the canal from Arcade and Dry Creek could combine to produce water high enough to overtop the levee. This risk will persist until at least 1995 when substantial improvements along both of these creeks and along the NEMDC are scheduled to be completed. At that point, the USCOE is expected to certify the ability of the canal to provide 100-year flood protection.¹²

⁷Id.

⁸Conversation with Bob Childs, Project Manager, USCOE, December 1989.

⁹Meeting with USCOE Representatives, December 1989.

¹⁰Conversation with Jim Clifton, Chief Engineer, Reclamation District 1000, December, 1989.

¹¹Meeting with USCOE Representatives, December 1989.

¹²Id.

The NEMDC handled a 70-year event in 1986, and this system has been improved since that time. Thus, there may be less than 1.43 percent chance that flows capable of damaging property and causing loss of life in the NEMDC floodplain will occur in any given year. Between 1990 and 1995, when it is anticipated that 100-year protection will be attained, there may be less than 8.27 percent chance of a damaging flood. By comparison, even if 100-year protection existed today, the risk of flooding over the next six years would be 5.85 percent. Accordingly, the existing level of protection may increase this risk by only 2.42 percent. The City Council could determine that this increase is not substantial and therefore the potential for flooding along the NEMDC system does not pose an unreasonable risk to persons or property during this interim period.

Sacramento River

As indicated in the DEIR, flooding on the Sacramento River has the potential to cause property damage and loss of life in both the Natomas and Pocket areas. The USCOE has determined that the levee in both these areas is unstable. However, there are substantial differences in the degree of this instability, and these differences warrant a separate appraisal of the risks to property and life in each area.

Property Damage

For purposes of determining the economic feasibility of constructing improvements along the Sacramento River levee, the USCOE has estimated that the Pocket area can withstand flows of up to an 80-year frequency on the Sacramento River.¹³ There is approximately a 1.25 percent chance that 80-year flows will occur in any given year. This portion of the levee is expected to be stabilized by the end of 1992, at which point the USCOE estimates that the Pocket Area will have protection from up to a 90-year event. Achievement of 100-year protection will require reoperation of Folsom Dam, also anticipated to occur by the end of 1992. Until that time, there is approximately a 3.70 percent chance that the area will be inundated by an 80-year event on the Sacramento River. By comparison, even if 100-year protection existed today, the risk of flooding over the next three years would be 2.97 percent. Thus, the existing level of protection may increase this risk by only 0.73 percent.

This portion of the levee withstood what is thought to have been a record 70-year

¹³Id.

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flow in 1986 without substantial damage.¹⁴ Erosion did occur at several locations. However, the State Department of Water Resources has repaired the eroded areas through filling and compaction of the levee slope and the addition of rip rap to the river side of the levee.¹⁵ The USCOE has also completed repairs at a site near Surfside Way. These repairs have involved excavation and refilling of the levee slope and the application of a filter fabric covering over portions of the levee toe drain.¹⁶ These repairs have put the levee in approximately as fit a condition as it was in 1986.¹⁷ Therefore, given the high level of existing protection in the area relative to the record flow of 1986 and the likelihood of increased protection by 1992, the City Council could find that the risk of property damage in the Pocket due to flooding on the Sacramento River is not unreasonable.

In the Natomas area, the USCOE's feasibility study assumes that due to the instability of the levee along the Sacramento River, flooding could occur in connection with a 40-year or greater event. This levee did, however, withstand what is thought to have been a record 70-year event in 1986, although during the course of this event, portions of the levee along the Garden Highway showed signs of failure in the form of boils and sloughing.¹⁸ The USCOE has since made approximately 3.7 million dollars worth of repairs in these areas, returning the levee to at least its pre-1986 level.¹⁹

Since the instability identified by the USCOE predates the 1986 event, the disparity between the USCOE's estimate of the current level of protection and the levee's actual performance in 1986 is attributable to the effectiveness of the floodfighting effort mounted

¹⁴USCOE, Information Paper on Alternatives, p. 6; conversation with Fred Chaimson, Chief of Flood Control Maintenance, Department of Water Resources, January 1990.

¹⁵Conversation with Chaimson, January 1990.

¹⁶Id.

¹⁷Id.

¹⁸USCOE, Information Paper on Alternatives, p. 6; USCOE, Sacramento River Flood Control System Evaluation, May 1988, p. 13, 15.

¹⁹Conversation with Clifton, December 1989.

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by local, State and Federal authorities.²⁰ While the City may continue to count on this floodfighting capability, given the USCOE's appraisal of the levee, it may be prudent to treat new development in the Natomas area as being subject to a greater risk of property damage due to flooding than anywhere else in the City. This approach could warrant a more restrictive policy by the City in permitting this development.

In fact, the proposed policy could delay construction of some residential structures in Natomas and would impose design restrictions on some nonresidential structures permitted in this area. While these restrictions may be justified in light of the USCOE's estimate of the current level of flood protection, they may not go far enough to permit the conclusion that the risk to property has been significantly reduced. For example, with respect to nonresidential structures, the policy imposes design restrictions only on projects "accepted for plan check after April 1, 1989." Projects receiving plan checks prior to this date are unrestricted. The risk of flooding is presumably the same for both of these classes. Thus, the distinction between them may not be warranted.

Similarly, the policy places no restrictions on the issuance of residential building permits if no entitlements are required or if application for necessary entitlements has been filed prior to April 1, 1989. The risk of flooding is presumably the same for all classes of residential development. Thus, the distinction between them may not be warranted.

Finally, the policy contemplates that unrestricted development may commence in Natomas as early as July 1, 1990, when it is anticipated that the initial construction contract for the levee reconstruction project on the Sacramento River levee will be awarded. While the award of this contract may help to identify the time period during which new structures will be at risk, it will not reduce the magnitude of this risk during that period.

In the event, the Council determines that a more restrictive approach to development in Natomas is warranted, the proposed policy could be modified to require that all residential structures comply with the requirements imposed by City/County regulations applicable to projects located in a flood hazard zone. This would mean that the lowest habitable floor of these structures would have to be elevated at least one foot above the water level expected to be reached in connection with a 100-year flood. Given the projected flood levels in Natomas, imposition of this requirement would result in a de facto moratorium on residential development in this area. This moratorium could be maintained until the levee stabilization effort is completed. Accordingly, during this period, only

²⁰Conversation with Terry Paxton, Director of Engineering, Sacramento Area Flood Control Agency, January 1990.

nonresidential projects would be permitted subject to compliance with the design restrictions currently contained in the policy.

Three considerations would support a determination by the City Council that this approach would significantly reduce the risk of property damage in Natomas:

- (1) Nonresidential structures are generally more resistant to flood damage than residential structures;
- (2) The design restrictions imposed by the policy will increase the flood resistant capacity of these structures; and
- (3) The period of levee instability will be brief, lasting no more than three flood seasons.

Public Safety

The proposed policy assumes that the instability of the Sacramento River levee poses particular public safety risks in both Natomas and the Pocket. As pointed out in the DEIR, the magnitude of any flood-related risk to public safety can be measured by the likelihood of flooding, and the warning time provided for evacuation of potential flood victims. In terms of warning time, the DEIR, relying on USCOE estimates, states that when a major flood occurs with less than one hour's notice to evacuate, one out of every two hundred twenty persons (1/220) located in the area subject to flooding could die. However, where a similar flood occurs with a warning time of two to six hours, the loss of life ratio declines to one out of every ten thousand one hundred persons (1/10,100).

Using these ratios, the DEIR concludes that levee instability along the Sacramento River raises the possibility that a levee break could occur without notice in the Pocket and Natomas areas in connection with a 100-year flood, thereby giving rise to the 1/220 loss of life potential. Furthermore, it is assumed that because of the relatively flat topography of the floodplain, flooding of less than a 100-year magnitude could cause similarly significant loss of life.

With respect to Natomas, the DEIR assumes, based on the USCOE's feasibility study, that a 40-year event could trigger a life threatening flood. As in the case of property damage, the Council could determine on public safety grounds that this level of risk warrants a more restrictive approach to development in Natomas. Once again, it may be possible to distinguish in this regard between residential and nonresidential projects. Assuming floodfighting and evacuation procedures may be more effectively carried out during daylight hours, the Council could find that nonresidential development, which

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involves primarily daytime uses, poses a less severe public safety risk and thus may be permissible.

As set forth in the DEIR, warning time can be the decisive factor in determining the potential for loss of life due to flooding. The loss of life ratios projected in the DEIR are tied entirely to the amount of time available to potential flood victims to evacuate the area subject to flooding. The 1/220 ratio attributed to Natomas during the period of levee instability assumes that a 100-year flood occurs without notice due to a break in the levee. In fact, this would be an unlikely event.

Levee breaks are generally not instantaneous developments. They are the product of a build-up of water over time and are usually preceded by danger signals such as sloughing and the formation of boils. Where water flows are properly monitored and levees are properly patrolled, a break in the levee can generally be anticipated and appropriate steps taken to reduce potential loss of life.²¹ As noted in Appendix G of the DEIR, the City has established a warning and response system which is designed to accomplish this objective. This system consists of a series of stages leading from a point at which "weather conditions cause the river/stream to rise near flood levels and no sign of improved weather conditions are forecast. . ." to a point at which "all nonessential personnel will be directed to evacuate the area immediately."

These stages are generally keyed to measurements of water levels in relationship to the design capacity of a given levee. Thus, for example, the "project flood alert stage" commences when "water level in the canal or river/stream has reached the design freeboard (normally three feet to five feet below the top of the levee)." However, because the Sacramento River levee has been declared unstable and thus may not be counted upon to function at its normal design capacity, certain adjustments may be necessary in order to implement the four-stage warning system. For example, the USCOE has estimated that the Sacramento River levee in its current condition can withstand up to a 40-year flood in the Natomas area. This estimate gives some indication as to when to commence the four-stage system. Furthermore, once this system is triggered, authorities may rely on factors such as sloughing and the formation of boils to determine when a flood event passes from the "river/stream warning stage" to the "project flood alert stage" and finally to the "flood danger stage."

The time involved in passing from one stage to the next will depend not only on how quickly the water in the river rises but also on how effectively the precursors of a

²¹Conversation with Burt McCollam, Division Manager, City of Sacramento Flood Control and Sewers Division, December 1989.

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levee failure (sloughing and boils) can be identified and combatted through existing floodfighting techniques. Since, with proper weather and flow forecasting, rises in water along the Sacramento River can be anticipated, and since proper floodfighting techniques can potentially delay or prevent a precipitous levee break, it may be that a major flood without warning can be avoided, especially during daylight hours when flow and levee monitoring and remedial levee stabilization efforts can be carried out most effectively.

Assuming that a levee break without warning can be avoided, the potential for loss of life due to flooding will turn on the relative efficiency of the City's evacuation procedures. As indicated in the DEIR, with two to six hours' notice these procedures can reduce the potential loss of life due to flooding to 1/10,100. While the DEIR makes no distinction in this regard between daylight and nighttime evacuation procedures, it may be easier to carry out an evacuation during the day. At least two considerations support this presumption. First, daytime land uses could facilitate evacuation more than nighttime uses. Depending on the hour, nighttime occupants of the floodplain could be at home asleep. They would thus be harder to alert and mobilize. During the day, most floodplain occupants would be awake and active, either at work or elsewhere. These persons would thus be easier to contact and mobilize. Second, assuming the affected population is prepared and cooperates with local authorities, the logistics of an evacuation may be easier to manage during daylight hours.

For these reasons, the City Council could determine that modification of the proposed policy to permit only nonresidential development in Natomas during the relatively short period prior to levee stabilization could reduce the public safety risk which might otherwise exist.

In the Pocket area, the DEIR assumes that a precipitous levee break could occur in connection with a 63-year flood on the Sacramento River, thereby threatening one in every 220 persons occupying the area at the time of the break. In fact, current USCOE data indicates that it would take at least an 80-year event on the Sacramento River to produce flooding in the Pocket.²² Furthermore, as discussed above, proper levee monitoring and floodfighting techniques may succeed in delaying or preventing a break in the levee. Thus, the loss of life projection contained in the DEIR may be overstated. In fact, the risk of a life threatening event may be no more than 1.25 percent in any given year. If the levee is stabilized and Folsom Dam reoperated by 1992 as anticipated, there may be no more than a 3.70 percent chance of a life threatening flood prior to the attainment of 100-year protection. This represents only a 0.73 percent increase in the risk of flooding that would otherwise exist with 100-year protection. On this basis, the City Council could determine

²²See footnote 13.

that the risk to life in the Pocket area due to flooding on the Sacramento River is not unreasonable.

Proposed Policy

The above analysis could lead the City Council to the following conclusions with respect to the proposed policy:

1. To the extent that the policy would permit unrestricted development of both residential and nonresidential development outside the Natomas area, the policy is not inconsistent with the General Plan.

2. To the extent that the policy imposes restrictions, including design restrictions, on the issuance of residential and nonresidential building permits in the Pocket area, these restrictions are unwarranted since this area is not presently subject to an unreasonable risk of flooding to people or property from either the American or the Sacramento River.

3. To the extent that the policy is modified to impose a de facto moratorium on residential development and to permit only appropriately designed nonresidential development in the Natomas area during the period of levee instability, the risk of flooding to new occupants and structures permitted in this area could be substantially reduced. Such a modification would require that:

(a) the restrictions on residential development must be made to apply to all residential projects, not just those requiring entitlements for which applications have been filed after April 1, 1989;

(b) the design restrictions imposed on the issuance of nonresidential building permits must be applied to all nonresidential projects, not just those receiving plan checks after April 1, 1989, and

(c) the above restrictions must be made to apply until the levee is stabilized, not simply until the first levee stabilization contract is let.

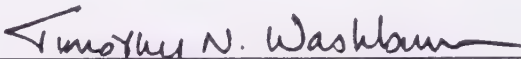
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4. Implementation of the policy as modified would not be inconsistent with the General Plan language on flooding.

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By 
TIMOTHY N. WASHBURN
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TNW/jg

3. LIST OF PERSONS COMMENTING

3. LIST OF PERSONS COMMENTING

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American River Coalition
- David Mogavero, President
Environmental Council of Sacramento
- Vicki Lee, Chair
Mother Lode Chapter
Sierra Club
- Steve Evans
Sacramento River Preservation Trust

7. City of Sacramento Planning Commission
October 26, 1989
Meeting Transcripts
8. Sacramento Flood Protection Agency
Board of Directors
October 26, 1989
Meeting Transcripts

4. COMMENTS AND RESPONSES

LAW OFFICES OF
GREGORY D. THATCH1730 I Street, Suite 220
SACRAMENTO, CA 95814
Telephone (916) 443-6956
Facsimile (916) 443-4632GREGORY D. THATCH
LARRY C. LARSEN
PATRICIA E. CURTIN

October 5, 1989

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OCT 10 1989

Planning and Development

WASHINGTON, DC OFFICE
1233 20th Street NW, Suite 501
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DELBERT L. SPURLOCK, JR.

Barbara L. Wendt
CITY OF SACRAMENTO
ENVIRONMENTAL DIVISION
1231 I Street, Room 300
Sacramento, CA 95814RE: DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE LAND USE PLANNING
POLICY WITHIN THE 100-YEAR FLOOD PLAIN (M89-054)

Dear Ms. Wendt:

This firm represents Kern Schumacher, William Payne and Lewis Homes of California with respect to their North Natomas property. On behalf of our clients, we submit the following comments to the Draft Environmental Impact Report for the Land Use Planning Policy Within the 100-year Flood Plain (DEIR).

1-1

The DEIR mentions that levee stabilization will provide an approximate 50-year level of flood protection for the Natomas area. (DEIR at Page 93). The current level of flood protection for that area is 40-year. (DEIR at Page 101). The DEIR should also mention that levee stabilization will eliminate the catastrophic effect of a major storm. Levee stabilization will eliminate the risk of a sudden levee break. Without this threat, if a major storm did occur, there would be adequate time to take the necessary precautionary measures. As a result, levee stabilization also will significantly reduce the potential risk of harm to life and property.

1-2

In an effort to reduce the potential number of fatalities during a 100-year flood, mitigation measure No. 18 suggests that development be prohibited in areas where flood inundation time is less than two hours. (DEIR at Page 112). The DEIR fails to identify those areas that may be inundated in less than two hours. Without this information, we cannot determine the impact this mitigation measure may have on our clients' property. If our clients' property is impacted, we reserve the right to suggest additional or alternative mitigation measures.

If you have any questions with regard to the above, please do not hesitate to call.

Very truly yours,


GREGORY D. THATCHGDT:dkb
cc: Kern Schumacher
William Payne
William Sullivan, Lewis Homes of California
C1055.ltr

LETTER 1

Response to Comment 1-1

Levee stabilization would reduce the risk of a sudden, unwarned levee break during storm events ranging from the 40-year to the 100-year storm (please refer to paragraph three on page 57, and paragraph four on page 107 of the Draft EIR document). The increase in warning time provided by levee stabilization would reduce the risk of potential loss of life (see Table 13 on page 110 of the Draft EIR document), since it would allow the local flood warning and emergency evacuation systems to operate effectively. However, levee stabilization would not eliminate the risk of damage to property due to a decrease in the likelihood of the flood event occurring only increasing the flood protection from 40 years to 70 years. For this analysis, the EIR evaluated impacts assuming a flood event does occur. Even though the risk of a sudden unwarned levee break is reduced with stabilization, an overtopping, or other levee failure could occur which could lead to levee break and subsequent flooding. The depth of the water would be the same for the purposes of this analysis with either a sudden unwarned levee break or an overtopping failure scenario. Since the depth of water during the flood event is the primary determinant in evaluating potential property damage, the difference in the type of levee failure does not materially affect the magnitude of the property damage estimates for the 100-year flood. Lesser flood events, the likelihood of which are estimated in the DEIR, could potentially have less impact than the 100-year event in certain areas of the flood plain. In Natomas, flooding from the lesser flood events could have very similar impacts to those projected for the 100-year flood since a decrease in the depth of water by even 50 percent would yield similar drainage estimates to those for the 100-year event.

However, in other parts of the flood plain, lesser flood events could yield smaller degrees of property damage. This lesser amount of damage would be due both to lower water depths and the lesser flood magnitude. Depending on the flood magnitude some parts of the flood plain may be protected from potential flooding. Detailed analyses of these lesser-than-100-year events would yield precise information but are not typically prepared by the City, County, or USCOE, and have not been prepared in this case.

The commentor is correct that with levee stabilization there is a greater opportunity for local officials to implement flood fighting procedures (i.e., patrolling of the levees, emergency levee repair, and localized evacuations) to help reduce the risk to life and property in developed areas of the flood plain.

Response to Comment 1-2

Studies completed by the City at this date suggest that all of South Natomas and the Pocket could be subject to water depths of greater than two feet within two hours of a levee failure. Studies have not yet been completed for other areas of the community, but

are currently under preparation. Please refer to paragraphs six and seven on page 107 and paragraphs one through four on page 108 for discussion of areas identified as having a relatively short warning time, defined for the purpose of this document as being less than two hours.

As stated in the explanation of the methodology for estimating impacts of flooding on loss of life, for the purpose of conservatism the whole of the Pocket and Natomas areas (as shown on Subarea Boundaries Map in Appendix D) were assumed to have warning times of less than two hours during the period from present to 1992 when levee stabilization is achieved.

Mitigation Measure 18 was aimed at development in the currently identified areas with relatively short warning times (Natomas and the Pocket Area, prior to levee stabilization). These warning times were based on time inundation studies performed by the City of Sacramento, and USCOE information. The two time inundation studies referenced in the DEIR are the only studies currently available. The City does have plans to do similar studies for the whole Sacramento region which will evaluate warning times in other parts of the City.

The Addendum to the EIR, included on pages 2 through 15 of this document, presents additional information regarding loss of life and property damage specifically related to Natomas and the Pocket Area.

The time inundation studies referenced in the DEIR are based on worst case USCOE scenarios for location and size of levee break. These studies are based on the best available information about location of future levee breaks but cannot be seen as actual predictions of the actual areas expected to flood because it is unlikely that multiple levee breaks would occur throughout the City at the same time.

Thus, although studies do exist presenting certain scenarios depicting particular areas in the Pocket and Natomas which would be flooded in less than two hours, those scenarios do not represent all of the areas that could be flooded in less than two hours. To be conservative, then, the EIR has assumed that all areas of Natomas and the Pocket are subject to flooding in less than the two-hour period.

Prior to any action to certify this EIR, the City will circulate for review this Final EIR. Upon completion of such a review, two public hearings will occur, one before the City Planning Commission, and one before the City Council.



COMMUNITY DEVELOPMENT DEPARTMENT

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1951 SOUTH RIVER ROAD P.O. BOX 219

WEST SACRAMENTO, CA 95691

(916) 373-5854

October 6, 1989

Barbara L. Wendt
City of Sacramento
Environmental Division
1231 "I" Street, Room 300
Sacramento, California 95814

RE: Draft EIR - Land Use Policy Planning in the Flood Plain

Dear Ms. Wendt:

The above draft EIR has been reviewed by the Planning and Public Works staffs of the City of West Sacramento. The staff has requested that the following issues be addressed in the final EIR to create an adequate document.

- 2-1 [1) (Planning) What was the February, 1986, storm in terms of magnitude? How was this magnitude calculated? By whom?
- 2-2 [2) (Planning) What are the new 100 year flood flows and levels?
- 2-3 [3) (Planning) What is source of Attachment 2 of Appendix E?
- 2-4 [4) (Planning) The assumptions behind the delineation of the flood plain need to be stated in the environmental setting. These assumptions would include no levee failures North, East, or West of the study area.
- 2-5 [5) (Planning) While the EIR is not to be used for flood control physical work, the document should note that all work intended through 1997 is predicated on raising the levees rather than dredging to obtain the additional flow capacity.

Should you have any questions about the above comments, please contact me at the Community Development Department office.

Sincerely,

Harry R. Gibson, III
Principal Planner

cc: Joseph Goeden, City Manager

LETTER 2

Response to Comment 2-1

According to the USCOE, the February 1986 storm was a 70-year event on the American River and a 70-year event along the Sacramento River. Please refer to "Calculating the 100-Year Event" on pages 55 through 56 of the Draft EIR document for a discussion of how the magnitude of a storm event is calculated. Please refer to pages 39 through 47 for further discussion of the 1986 event.

Response to Comment 2-2

The USCOE calculated the 100-year flood flow down the American River to be 230,000 cubic feet per second (cfs). FEMA defines the 100-year flow to be 180,000 cfs. The numbers vary because the USCOE evaluation uses a factor to account for limited data. This factor builds into the analysis a broader range of probable flood events and results in a greater 100-year flood than generated from a FEMA analysis. The 100-year flow calculated for the Sacramento River at "I" Street is 126,000 cfs, for Dry Creek is 9,600 cfs, and for Arcade Creek is 5,700 cfs based on both the USCOE and FEMA standards.

Response to Comment 2-3

There is no Attachment 2 of Appendix E. It appears that the commentor is referencing the flood depth-damage table referred to in paragraph five on page 3 of Appendix E. The source of this table is the USCOE "Sacramento River Flood Control System Evaluation Initial Appraisal Report - Sacramento Urban Area," May 1988.

Response to Comment 2-4

The commentor's question related to the approach taken by FEMA in developing the 100-year flood plain map. This was confirmed in a telephone conversation between the commentor and the EIR preparers on November 7, 1989.

The delineation of the flood plain is based on FEMA procedures which describe worst case scenarios for a given series of levee breaks along a system. FEMA assumes a hypothetical break in the levee at a specific location, and estimates the maximum boundary of the flood flow from such a break. The levee is then assumed to fail further down in the system and so on, each time letting the full flow of the system through the break. All of these maximum flood events for each levee break are then added together to produce an aggregate flood plain for the entire system.

Response to Comment 2-5

The comment is noted. The levee improvement scenario (assumed to take place by 1997) discussed in the DEIR is based on any potential combination of raising the levees, and additional upstream storage, which could result in 100-year flood protection. Providing increased flood protection by dredging existing river channels was not assumed in the DEIR analysis and is not currently under evaluation as a potential flood protection measure by the USCOE.

CALIFORNIA CENTRAL VALLEY FLOOD CONTROL ASSOCIATION

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703 ELKS BUILDING, 921 - 11th STREET, SACRAMENTO, CALIFORNIA 95814
TELEPHONE (916) 446-0197

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Planning and Development

CHARLES H. MICHAEL, *President*
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KENNETH A. RUZICH, *Treasurer*
MICHAEL A. CATINO, *Manager*
GEORGE BASYE, *Attorney*
DONALD E. KIENLEN, *Engineer*

October 24, 1989

Ms. Barbara L. Wendt
City of Sacramento
Environmental Division
1231 I Street, Room 300
Sacramento, CA 95814

RE: Draft Environmental Impact Report for the Land
Use Planning Policy within the 100-year Flood
Plain in the City and County of Sacramento
(M89-054) SCH Number 89071707

Dear Ms. Wendt:

Initially we wish to compliment your office on the well developed Environmental Impact Report. Unfortunately many Sacramentans will not have an opportunity to read and/or comprehend the risks involved and the items which you have adequately identified in terms of "This is a significant impact."

Our comments are as follows:

3-1

1. On page 12 - The discussion on increasing Folsom Reservoir flood space from 400,000 to about 600,000 acre-feet would impact the revenues of the Central Valley Project. In the past it was stated that this loss of revenues would approach \$4 million. This loss must be made up by the current Project's water and power users within the payout period. We recognize that the above is still under negotiation but should be qualified in some form to identify this potential impact.

BOARD OF DIRECTORS

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3-2 [2. Page 49 - The "additional 100 to 250,000 acre-feet" should be qualified since it does not conform to the "additional 190,000 acre-feet" shown on page 12.

3-3 [3. Page 51 - This Association does not support an "expandable dam" and recommends that a multipurpose 2.3 million acre-foot dam be constructed. An expandable dam would significantly add to higher final costs which must be borne by the water and power users.

We appreciate the opportunity to comment on your Draft Report.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "M. A. Catino". The signature is fluid and cursive, with a long horizontal stroke at the end.

M. A. Catino
Manager

cc: Reclamation District No. 1000
American River Flood Control District
Natomas Central Water District

LETTER 3

Response to Comment 3-1

The commentor is correct in that the reoperation of Folsom Dam would impact the revenues of the Central Valley Project. Reoperation would have some impact on other beneficial uses, such as: water supply, power generation, water and non-water contact recreation, fisheries, and freshwater and wildlife habitat. According to the U.S. Bureau of Reclamation, the actual dollar value of these lost benefits would vary depending on the assumptions made, and could range between two and eleven million dollars (exclusive of recreation, fishery, and habitat uses) (Don Paff, 1989).¹

The commentor is also correct in that negotiations with the Bureau of Reclamation concerning possible revenue lost to the Central Valley Project is still under negotiation and will not be settled until after the completion of the USCOE's Folsom Reservoir Reoperation Study.

Response to Comment 3-2

The commentor reference to potential additional storage capacity in Folsom Reservoir addresses two issues related to such additional storage. The reference on page 12 notes that it has been estimated that in order to provide 100-year protection in the entire new flood plain in Sacramento, an additional 190,000 acre feet of storage capacity in Folsom Reservoir will be necessary. This would provide 100-year protection in combination with additional improvements to the levee system along the Natomas East Main Drainage Canal. The reference on page 49 relates to the Folsom Reoperation Study being undertaken by the U.S. Army Corps of Engineers. In this study, the USCOE is evaluating a range of reoperation alternatives, ranging from 100,000 to 250,000 acre feet of additional storage capacity. The 190,000 acre feet, referenced on page 12, falls within this range.

Response to Comment 3-3

Response to Comment noted. Please also see Response to Comment 3-1.

¹ Don Paff, Chief of Operations, Central Valley Project, personal communication, November 17, 1989.



COUNTY OF SACRAMENTO
DEPARTMENT OF PLANNING
AND COMMUNITY DEVELOPMENT
ENVIRONMENTAL IMPACT SECTION

LETTER 4 SUSAN R. ZIEGLER
DIRECTOR
ALCIDES FREITAS
ENVIRONMENTAL COORDINATOR

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OCT 24 1989

Planning and Development

October 24, 1989

Barbara Wendt
City of Sacramento
Environmental Division
1231 I Street, Room 300
Sacramento, CA 95814

SUBJECT: COMMENTS ON THE DRAFT EIR - LAND USE PLANNING WITHIN THE
100-YEAR FLOOD PLAIN IN THE CITY AND COUNTY OF SACRAMENTO

Dear Ms. Wendt:

Based on a reading of the Draft EIR on flood control policy by this office and by staff of the County Planning Department, we submit the following comments:

Sections 5.3, 5.4, and 6.1

- 4-1
- 1.. In Section 5.3 (Land Use), several tables are presented including projected population growth in the flood plain and projected residential and non-residential development in the flood plain. In Section 5.4 (Flood Hazards, Public Health and Safety). There is a table listing the amount of damage to property due to a 100-year flood. In Section 6.1 (Cumulative Impacts), there are figures listed for potential property damage and potential loss of life.

It would be very desirable to have these tables differentiate between the City and County in the figures or amounts presented. These figures would provide both the City and County with some direction in deciding the most appropriate land uses suitable for additional urban development.

- 4-2
2. On Page 80 of the Draft EIR (Consistency with Plans, Policies, and Programs), two mitigation measures are provided to make the proposed land use policy consistent with County General Plan policies related to flooding and thus reduce the impact to a less-than-significant level.

We are of the opinion that in order to reduce the impact to a less-than-significant level, a more restrictive definition of the proposed land use policy should be adopted. This could best be accomplished by continuing County General Plan policy 2.4.17 prohibiting "urban-type" uses on unprotected flood land except the following three areas:

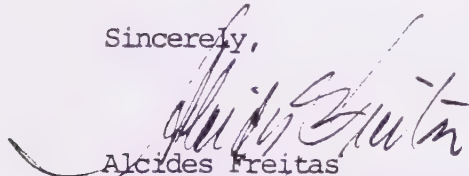
- Sacramento Metropolitan Airport SPA
- The area within the County between Del Paso Road to the north and I-80 to the south.

4-2
CONT. ° The area in South Sacramento having as its approximate boundaries Stockton Boulevard to the east, Western Pacific Railroad to the west, 14th Avenue to the north, and Mack Road to the south.

4-3 3. Appendix D is mislabeled. There does not appear to be a "Detailed Methodology for Projection of Population Housing, and Non-residential Development."

We thank you for the opportunity to comment.

Sincerely,


Alcides Freitas
Environmental Coordinator

AF:lmq



COUNTY OF SACRAMENTO

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT

827 SEVENTH STREET, SACRAMENTO, CALIFORNIA 95814

(916) 440-6141

SUSAN R. ZIEGLER, DIRECTOR

January 24, 1990

Barbara Wendt, Associate Planner
Sacramento City Planning Department
1231 I Street, Room 300
Sacramento, CA 95814

Re: **PROPOSED FLOOD LAND USE POLICY AND EIR**

Dear Ms. Wendt:

The purpose of this letter is to clarify the County Planning Department's position and recommendations concerning the proposed policies for land use planning within the 100 year flood plain and concerning General Plan consistency.

The DEIR states that the proposed policy is inconsistent with Policy 2.4.17 of the current County General Plan. That General Plan policy prohibits "urban-type" uses on unprotected flood land. The proposed policy would allow for urban development consistent with the current General Plan map to proceed. The DEIR lists as a possible mitigation measure for the significant impact of having inconsistent policies, amending the current General Plan policy to indicate that "unprotected flood land" does not include lands within the designated A-99 Flood Hazard Zone.

It is my understanding that the City Attorney's Office has submitted an addendum to the EIR that suggests certain modifications in the proposed policy to be presented to the City Council. It is my understanding that the suggested modifications consist of the following points:

1. All residential development in the Natomas area will be required to comply with the City's Flood Management Ordinance;
2. Non-residential development in the Natomas area may proceed if it meets the flood area design standards that have been developed by the City; and
3. Development in other parts of the City may proceed without additional flood-related conditions or restrictions.

The Board of Supervisors has not yet had the opportunity to consider either policy or the implications of amending policy 2.4.17 of the General Plan. Either the approach contemplated in the DEIR or the suggested modification would constitute a departure from the current County policy of not allowing urban development in the flood plain. If the Board chooses to adopt a new approach, we would ask them to direct the Planning Department to prepare an amendment to General Plan Policy 2.4.17 that indicates the prohibition on urban uses in the flood plain does not apply to urban land use designations shown on

the County General Plan Map as of January 1, 1990. This will allow those relatively few areas that are already planned for urbanization but are now within the new 100 year flood plain to continue to develop.

Secondly, the proposed policy contains a commitment by County that it will not designate increases in urbanization in the 100 year flood plain except through the County's pending General Plan Update. The General Plan update program was initiated by the County in March 1988 and is expected to be concluded in early 1991. The new plan will guide development in the County for the next twenty years, to the year 2010.

We feel that adequate flood protection can be achieved in the Natomas area within the time frame of the plan. We think it is important, therefore, that this policy allow the Board of Supervisors to consider planning for the long range development of the Natomas area.

It is important to understand that a general plan land use designation does not, in itself, allow the development of property without additional discretionary entitlements from the County. The additional entitlements (zoning, subdivision maps, use permits, etc.) can only be approved if they are consistent with the policies and the land use designations of the general plan. We propose, therefore, that should the Board of Supervisors decide to approve the proposed land use policies, it should also:

1. Direct the Planning Department to include policies in the new General Plan stating that, for areas within the 100 year flood plain that are newly designated for urban use, no rezoning or other actions needed for consistency with the General Plan will be taken or approved until the special legislation expires October 31, 1992.
2. Amend Ordinance No. 0715, relating to initiation of general plan amendments, to apply to the Natomas area included in the 100 year flood plain through October 31, 1992. This ordinance prohibits the Planning Department from accepting applications for general plan amendments that would change the land use designations from rural uses to urban uses.

With these clarifying statements, we feel the policy being recommended complies with the spirit and intent of the agreement with Congress, in that it will not allow any additional development in the flood plain until the flooding problem has been solved.

I hope these comments clarify our recommendations.

Sincerely


GARY STONEHOUSE
Principal Planner

LETTER 4

Response to Comment 4-1

At the request of the commentor, the figures for property damage and loss-of-life have been differentiated between the following three geographic areas: 1) Area A: Existing City of Sacramento; 2) Area B: Existing Sacramento County to be annexed to the City of Sacramento; and 3) Area C: Areas to Remain in Sacramento County. It was assumed that all areas of the County within the City's Sphere of Influence would be annexed to the City within the analysis time period. These areas include a small portion of North Natomas and a small portion of the County.

Table 5A, 6A, 7A, A, and B below provide the information requested by the commentor.

Response to Comment 4-2

The Commentor has suggested that any potential inconsistency between the proposed Land Use Policy and the County's General Plan may be eliminated by amending the General Plan. The proposed amendment as clarified in the County's letter dated January 24, 1990 (Attached to Letter 4) would state that the General Plan policy of "prohibiting urban-type uses on unprotected flood land" would not apply to areas designated for urban uses on the County General Plan Map as of January 1, 1990. This amendment would allow the areas which are already planned for urbanization but which are not within the newly identified 100-year flood plain to continue to develop.

This amendment could eliminate any immediate inconsistency between the proposed Land Use Policy and the County General Plan if the County also implements the other planning policies suggested in the January 24 letter. These policies would insure that the lands designated for urban type uses as of January 1, 1990 would remain the only lands subject to development prior to the expiration of the special legislation on flooding on October 31, 1992. After that date, however, development could occur in areas currently designated agricultural based on new urban designations contained in the County's General Plan Update. If the new designations involve lands in Natomas, permitting development in these areas could be inconsistent with the policy of prohibiting urban-type uses on unprotected lands, since these lands will not achieve 100-year flood protection until 1996 at the earliest, when improvements along the Natomas East Main Drainage Canal and Arcade and Dry Creeks are expected to be completed.

This potential future inconsistency could be avoided if, upon expiration of the special legislation, the County amends its General Plan to state that the policy of prohibiting urban-type uses on unprotected flood land does not apply to areas designated for urban uses on the County General Plan Map then in effect.

TABLE 5A
POPULATION IN THE FLOOD PLAIN BY JURISDICTION
(IN THOUSANDS)

	1988	1988-1992 Growth	1992	1992-1997 Growth	1997	1997-2010 Growth	2010	1997-2010 Annual Increment
<u>Area A</u>								
Natomas	24.1	3.8	27.9	3.7	31.7	60.8	92.4	4.7
Pocket	40.4	2.2	42.5	1.2	43.7	0.4	44.1	0.01
RFP ¹	223.1	16.8	240.0	16.0	255.9	52.6	308.5	4.1
<u>Area B</u>								
Natomas	0.2	0	0.2	0	0.2	3.3	3.5	0.3
Pocket	0	0	0	0	0	0	0	0
RFP ¹	0.1	0	0.1	0	0.1	0	0.1	0
<u>Area C</u>								
Natomas	6.0	0	6.0	0	6.0	2.4	8.5	0.2
Pocket	0	0	0	0	0	0	0	0
RFP ¹	70.8	4.2	75.0	7.5	82.5	9.6	92.0	0.7

¹ RFP = Rest of Flood Plain.

TABLE 7A
PROJECTED NON-RESIDENTIAL DEVELOPMENT
IN THE FLOOD PLAIN BY JURISDICTION
(SQUARE FEET IN THOUSANDS)

	1988	1988-1992 Growth	1992	1992-1997 Growth	1997	1997-2010 Growth	2010	1997-2010 Annual Growth
<u>Area A</u>								
Natomas	3,020	836	3,856	478	4,334	19,203	23,537	1,477
Pocket	1,338	304	1,642	380	2,022	985	3,007	76
RFP ¹	57,562	11,804	69,365	13,876	83,241	27,453	110,694	2,112
<u>Area B</u>								
Natomas	290	160	450	92	542	3,672	4,219	283
Pocket	0	0	0	0	0	0	0	0
RFP ¹	99	113	212	142	354	368	722	28
<u>Area C</u>								
Natomas	794	123	917	71	988	2,829	3,817	218
Pocket	0	0	0	0	0	0	0	0
RFP ¹	12,063	5,647	17,710	6,179	23,889	7,875	31,764	606

¹ RFP = Rest of Flood Plain.

TABLE 6A

PROJECTED RESIDENTIAL DEVELOPMENT IN THE FLOOD PLAIN
BY JURISDICTION

	1988	1988-1992 Growth	1992	1992-1997 Growth	1997	1997-2010 Growth	2010	1997-2010 Annual Growth
<u>Area A</u>								
Natomas	10.3	1.7	11.9	1.8	13.7	30.0	43.7	2.3
Pocket	16.3	0.8	17.1	0.6	17.7	1.0	18.6	0.1
RFP ¹	96.6	6.7	103.4	6.9	110.3	27.5	137.9	2.1
<u>Area B</u>								
Natomas	0.07	0	0.07	0	0.07	1.5	1.6	0.01
Pocket	0	0	0	0	0	0	0	0
RFP ¹	0.1	0.9	0.09	0.9	1.9	3.8	5.7	0.03
<u>Area C</u>								
Natomas	2.9	0	2.9	0	2.9	1.2	4.1	0.01
Pocket	0	0	0	0	0	0	0	0
RFP ¹	31.8	2.5	34.3	1.7	36.0	6.1	42.1	0.05

¹ RFP = Rest of Flood Plain.

TABLE A
DAMAGE TO PROPERTY DUE TO 100-YEAR FLOOD BY JURISDICTION
STRUCTURES AND CONTENTS
(IN MILLIONS OF 1989 DOLLARS)

	1988	1988-1992 Growth	1992	1992-1997 Growth	1997	1997-2010 Growth	2010	1997-2010 Annual Growth
<u>Area A</u>								
Natomas	444	123	567	70	637	2,814	3,451	216.5
Pocket	368	83	451	105	556	271	827	20.8
RFP ¹	7,117	1,346	8,463	1,603	10,066	3,025	13,091	232.7
<u>Area B</u>								
Natomas	42	23	65	13	78	526	604	40.5
Pocket	0	0	0	0	0	0	0	0
RFP ¹	18	19	37	25	62	65	127	5.0
<u>Area C</u>								
Natomas	134	18	152	11	163	424	587	32.6
Pocket	0	0	0	0	0	0	0	0
RFP ¹	1,905	682	2,588	771	3,359	930	4,289	71.5

¹ RFP = Rest of Flood Plain.

TABLE B
NUMBER OF FATALITIES IN THE 100-YEAR FLOOD PLAIN
BY JURISDICTION

	1988 Existing Level Flood Protection	1989- 1992	1992 w/o Stabilization	1992 w/ Stabilization	1992- 1997	1997 w/Additional Upstream Storage & Levee Improvements	1997-2010 Annual Increment
<u>Area A</u>							
Natomas	110	17	127	2.7	0.4	3.1	0.5
Pocket	183	10	193	4	0.1	4.3	0
RFP ¹	22	1.6	24	24	1.6	25.3	0.4
<u>Area B</u>							
Natomas	1	0	1	0	0.2	0.3	0
Pocket	0	0	0	0	0	0	0
RFP ¹	0	0	0	0	0	0	0
<u>Area C</u>							
Natomas	27	0	27	0.6	0	0.6	0
Pocket	0	0	0	0	0	0	0
RFP ¹	7	0.4	7	7	0.7	8.2	0.1

¹ RFP = Rest of Flood Plain.

Response to Comment 4-3

The body of information intended to be included in Appendix D was inadvertently omitted in the printing of the Draft EIR. As such, Appendix D is printed below:

"APPENDIX D

"DETAILED METHODOLOGY FOR PROJECTION OF POPULATION, HOUSING, AND "NON-RESIDENTIAL DEVELOPMENT

"Sources

"The source for information on projected population, housing and non-residential development is SACOG's minor traffic zone projections. These projections are available in five-year increments for population and housing units. For employment (which was used to generate non-residential growth) projections were available for only 1985 and 2005.

"Methodology

"Population and Housing

"Minor zones were identified for the entire flood plain. Projections for the flood plain and the flood plain subareas were identified for the five-year increments. For mid-year increments (i.e., 1992 or 1997), straight-line projections were made between the five-year increments.

"Non-Residential Development

"The basis for these projections were SACOG projections for employment growth. Employment growth was translated into levels of development in square feet based on square footage for employee factors from the City of Sacramento General Plan EIR.

"Detailed estimates for population, housing, and employment/non-residential development are included on the pages that follow. These tables represent the original SACOG projection data at the minor zone level from which the projections and analyses were prepared for the EIR."

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL POPULATION

	1988	1990	1992	1995	1997	2000	2005	2010
Subarea 1 - Natomas								
570100	1406	1322	1319	1314	1380	1480	1467	1541
570110	1205	1248	1255	1266	1415	1638	1771	2114
570200	2555	2517	2583	2682	2775	2915	3109	2977
570210	113	65	52	32	19	0	0	0
570220	0	0	0	0	0	0	0	0
570230	858	1781	1948	2198	2524	3014	2990	2923
570240	0	0	0	0	243	608	691	681
570250	6569	6908	7106	7403	7528	7715	7664	7481
570261	4083	4059	4190	4386	4333	4253	4137	4021
570262	6361	6571	6523	6451	6374	6258	6018	5705
570300	14	15	15	15	14	13	2577	5000
570310	7	7	7	6	6	6	2084	4584
570320	5	3	3	3	3	3	817	5573
570330	285	279	281	284	590	1050	1964	3241
570340	2	0	0	0	0	0	0	0
570350	15	15	9	0	0	0	0	0
570360	26	26	26	27	27	28	27	30
570370	5219	5181	5181	5181	5181	5181	5105	5030
570400	16	18	19	20	23	28	17	15
570410	8	282	602	1083	1081	1078	1373	1505
570420	434	1244	1811	2662	3155	3895	4143	4129
570430	179	182	185	189	190	192	203	210
570440	53	49	50	51	51	51	50	48
570450	112	109	109	109	109	110	109	108
571100	351	358	358	357	357	357	2715	3478
571110	0	0	0	0	0	0	4017	7972
571120	2	2	2	3	3	3	530	1313
571130	4	4	4	3	3	3	1661	4455
571140	0	0	0	0	0	0	1510	8474
571150	0	0	0	0	0	0	3867	7777
571160	0	6	7	8	9	10	2547	7469
571170	18	11	10	9	9	8	1420	3424
571200	0	7	7	8	8	8	8	7
571210	6	3	3	3	3	3	3	1
571220	53	57	57	57	57	57	57	55
571230	0	0	0	0	0	0	0	0
571240	8	18	18	17	17	17	17	16
571250	40	47	47	47	47	48	49	46
571300	7	2	2	1	1	0	0	0
571310	13	18	17	16	15	14	12	9
571320	3	0	0	0	0	0	0	0
571330	14	11	11	11	11	10	9	2595
571340	8	13	13	13	13	14	15	13
571350	103	91	89	87	86	85	81	82
571360	193	193	197	203	207	213	218	219
SUBTOTAL	30,348	32,722	34,115	36,205	37,869	40,366	65,052	104,321
Subarea 2 - Rio Linda								
572120	957	9	434	1072	1089	1115	1135	1163
572330	451	433	432	431	431	430	430	427
572340	1599	1518	1674	1908	1911	1915	1959	2178
572350	483	511	553	616	784	1035	1135	1398
572360	548	692	833	1045	1088	1153	1274	1355
572380	101	101	101	101	102	104	106	107
572420	702	1055	1149	1291	1383	1520	1956	4231
SUBTOTAL	4,841	4,319	5,177	6,464	6,787	7,272	7,995	10,859
Subarea 3 - North Sacramento								

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL POPULATION

	1988	1990	1992	1995	1997	2000	2005	2010
565000	2917	2993	3009	3032	3137	3294	3585	4572
565010	786	1455	1687	2034	2683	3656	5659	8016
566000	1928	2102	2140	2196	2213	2239	2246	2623
566010	2586	2774	2798	2835	2929	3070	3411	3823
567000	1467	1678	1696	1724	1742	1770	2979	5851
567010	3268	3535	3557	3591	3599	3612	5839	10182
567020	3208	3565	3597	3645	3530	3358	3774	4492
567030	1444	1309	1379	1485	1553	1655	3843	7034
568000	4845	3661	4029	4582	4561	4529	4523	4779
568010	994	22	422	1023	1030	1041	1020	1014
569000	1031	1056	1055	1053	1053	1054	1033	1016
569010	962	1001	1005	1012	1014	1017	1006	992
569020	804	888	889	891	893	895	877	862
569030	4	0	0	0	0	0	0	0
569040	899	976	1027	1104	1125	1156	1191	1200
569050	636	646	645	643	640	636	610	619
SUBTOTAL	27,779	27,661	28,937	30,850	31,703	32,982	41,596	57,075
Subarea 4 - North Downtown								
953000	780	801	799	795	793	790	777	763
953010	44	45	45	44	44	43	44	41
953021	207	185	181	175	171	165	168	178
953022	10	12	12	11	11	12	10	10
SUBTOTAL	1041	1043	1035.8	1025	1019	1010	999	992
Subarea 5 - Downtown								
702000	3701	3797	3797	3798	3804	3812	3728	3677
703000	3261	3332	3343	3360	3344	3320	3262	3200
715000	2446	2479	2521	2584	2594	2609	2582	2537
715010	2159	2202	2199	2195	2201	2210	2136	2111
716000	1387	1433	1438	1446	1448	1451	1436	1416
716010	1417	1465	1463	1460	1456	1451	1421	1409
716020	1301	1328	1328	1329	1329	1329	1307	1290
716030	1449	1462	1452	1437	1431	1423	1376	1358
716021	1260	1303	1306	1311	1315	1322	1303	1289
716022	1545	1575	1588	1607	1612	1619	1608	1593
718001	1405	1453	1467	1489	1494	1502	1491	1485
727000	3207	3281	3278	3274	3279	3286	3242	3192
728000	2718	2788	2774	2754	2734	2703	2650	2618
822000	1936	1968	1972	1977	1993	2017	2014	1987
822011	1544	1550	1526	1490	1474	1449	1418	1386
822012	1132	1169	1165	1160	1155	1148	1125	1108
823000	3249	3411	3431	3461	3474	3494	3461	3394
824000	917	941	944	948	951	955	955	955
824010	3712	3754	3760	3769	3754	3731	3638	3590
824020	0	0	0	0	0	0	0	0
825000	1662	1700	1690	1674	1661	1642	1598	1570
826000	2560	2592	2572	2541	2536	2528	2465	2401
833000	1536	1562	1578	1572	1567	1560	1530	1508
833010	3221	3312	3300	3283	3274	3261	3207	3171

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL POPULATION

	1988	1990	1992	1995	1997	2000	2005	2010
835100	2936	3000	2997	2992	2980	2963	2888	2850
836000	2406	2444	2478	2529	2563	2615	2649	2716
839000	1614	1637	1656	1685	1680	1672	1651	1630
839010	1305	1329	1326	1322	1323	1324	1308	1299
839020	1423	1391	1387	1381	1372	1359	1328	1301
904000	3958	4042	4032	4018	4008	3994	3946	3898
905000	3190	3259	3280	3311	3334	3368	3394	3414
906000	955	1050	1052	1056	1064	1076	1059	2050
907000	1356	2301	1901	1301	1301	1302	1294	1286
908000	1315	1372	1389	1414	1417	1421	1414	1388
909000	250	259	259	258	259	261	260	259
910000	920	959	959	958	958	958	956	954
911001	934	990	1012	1044	1060	1085	1118	1141
911002	614	613	611	609	607	604	592	579
912000	2632	2668	2740	2848	2858	2872	2832	2831
913000	2952	3044	3044	3045	3037	3026	2980	2932
914000	2541	2528	2518	2502	2479	2444	2372	2318
919000	2965	3081	3081	3082	3082	3083	3037	2978
920000	2436	2429	2461	2509	2529	2559	2533	2487
921000	860	1062	1124	1216	1275	1364	1475	1446
921010	1266	1305	1303	1299	1297	1294	1270	1249
SUBTOTAL	87,553	90,640	90,503	90,298	90,365	90,466	89,309	89,251
Subarea 6 - River Park								
701000	3938	4040	4043	4048	4032	4007	3924	3872
752100	1219	1208	1207	1205	1204	1202	1197	1193
SUBTOTAL	5,157	5,248	5,250	5,253	5,235	5,209	5,121	5,065
Subarea 7 - Campus Commons								
654100	2931	3014	3021	3032	3040	3052	3032	3007
654110	3459	3510	3531	3563	3584	3616	3634	3616
654120	1140	1093	1087	1077	1071	1062	1054	1018
654130	1689	1646	1657	1673	1685	1704	1717	1710
654200	951	977	979	981	984	988	980	971
654210	147	136	133	129	128	126	122	118
654220	3	1	1	1	1	0	0	0
654230	844	1019	1024	1032	1038	1046	1028	1077
655200	0	0	0	0	0	0	0	0
655210	213	233	234	235	237	239	236	232
655220	4453	4546	4544	4542	4541	4539	4467	4434
655300	2605	2738	2786	2858	2923	3021	2998	2905
655310	2290	2345	2368	2402	2478	2593	2792	2717
655320	1504	1679	1705	1743	1768	1806	1868	2881
655400	4814	5077	5145	5247	5327	5447	5509	5483
655410	2965	3023	3043	3072	3093	3124	3131	3106

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL POPULATION

	1988	1990	1992	1995	1997	2000	2005	2010
656120	2702	2731	2718	2698	2690	2677	2622	2590
565200	3150	3187	3185	3181	3173	3160	3122	3066
656210	966	965	965	966	966	965	948	854
656220	3374	3395	3470	3583	3593	3608	3580	3547
658210	1563	1524	1597	1707	1697	1682	1639	1606
658200	2379	2382	2392	2406	2420	2440	2376	2356
658230	1996	2089	2077	2059	2037	2004	1933	1879
678030	0	0	0	0	0	0	0	0
662200	2158	2004	2100	2244	2269	2307	2265	2275
SUBTOTAL	48,296	49,314	49,761	50,431	50,741	51,206	51,053	51,448

Subarea 8 - Perkins

752110	1693	1754	1770	1795	1795	1796	1771	1750
752200	1931	1983	1981	1979	1971	1959	1911	1876
752210	1934	1934	1911	1876	1872	1866	1843	1808
752300	16	16	16	16	16	16	16	15
752330	3643	3784	3786	3788	3799	3815	3727	3655
752340	3565	3588	3517	3410	3428	3454	3430	3372
SUBTOTAL	12,782	13,059	12,981	12,864	12,881	12,906	12,698	12,476

Subarea 9 - La Riviera

791100	7704	7637	7627	7611	7620	7633	7412	7280
791110	2017	2190	2210	2240	2247	2257	2260	2476
791120	1536	1475	1539	1634	1625	1612	1566	1530
791200	1595	1597	1599	1601	1604	1608	1590	1566
SUBTOTAL	12,852	12,899	12,974	13,086	13,096	13,110	12,828	12,852

Subarea 10 - Pocket

834000	3361	3421	3407	3386	3369	3343	3266	3198
834010	1199	1206	1203	1198	1194	1188	1153	1134
840100	2847	2892	2898	2908	2900	2888	2839	2815
840110	2232	2227	2207	2176	2172	2155	2088	2012
840120	2205	2286	2316	2362	2371	2385	2369	2335
840200	6035	6268	6315	6386	6436	6512	6493	6447
840210	4142	4202	4192	4177	4165	4148	4117	4056
840300	5802	5547	5630	5755	5823	5924	5845	5741
840310	3012	2933	2879	2768	2778	2794	2686	2637
840320	5105	5138	5145	5156	5166	5180	5501	5511
840330	3142	3689	3724	3776	3812	3865	3874	3955
840340	1284	2274	2596	3079	3557	4275	4330	4302
SUBTOTAL	40,366	42,103	42,513	43,127	43,743	44,667	44,561	44,143

Subarea 11 - Meadowview

835200	3246	3326	3318	3307	3289	3263	3184	3129
838100	1	1	1	1	1	1	1	0
838110	355	364	362	350	357	355	345	339
838120	4423	4418	4416	4416	4400	4375	4264	4154
838130	601	719	735	714	701	681	644	633
838140	0	0	0	0	0	0	0	0
841000	2173	2431	2518	2650	2889	3248	3647	3845
841010	1498	1516	1512	1506	1512	1521	1519	1504
842100	5510	5380	5309	5203	5191	5174	5072	4957
842200	4899	4949	4931	4905	4924	4952	5141	5351

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

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TOTAL POPULATION

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	1988	1990	1992	1995	1997	2000	2005	2010
842300	4380	4387	4326	4234	4301	4402	4901	5208
845000	1246	1489	1532	1596	1636	1696	1674	1670
845010	1967	2009	2012	2016	2011	2004	1950	1918
845020	1434	1435	1439	1444	1435	1421	1345	1319
845030	1426	1589	1250	742	1178	1833	1952	1980
849120	3961	4258	4514	4897	4977	5096	4991	5053
SUBTOTAL	37,326	38,299	38,175	37,990	38,803	40,022	40,630	41,060

Subarea 12 - Florin

731100	3842	3819	3805	3784	3776	3765	3657	3591
732100	4961	6060	6670	7584	8175	9061	10414	11559
732200	3876	4222	4304	4428	4507	4626	4797	5015
746100	5673	5685	5641	5575	5640	5737	6017	6254
747000	4108	4960	4987	5027	5008	4980	4864	4777
747010	909	977	1161	1438	1474	1527	1527	1510
747020	1335	1314	1303	1286	1276	1260	1220	1174
849100	0	0	0	0	0	0	0	0
SUBTOTAL	24,704	27,037	27,871	29,122	29,856	30,956	32,496	33,880

Subarea 13 - Granite Park

751180	3	3	2	0	0	0	0	0
752310	579	381	381	380	380	381	381	379
752320	2	8	8	8	8	8	8	7
752350	37	28	25	20	20	19	20	18
752360	38	35	33	30	29	27	26	25
752380	8	8	7	6	6	6	6	5
752390	186	191	191	191	190	189	185	180
SUBTOTAL	853	654	646	635	633	630	626	614

Subarea 14a - Morrison Creek/North

843000	3661	4354	4596	4960	5390	6035	6403	7721
843010	1960	1832	1812	1782	1828	1897	2070	2221
849200	1376	2954	3210	3595	4297	5350	5562	5706
849210	5688	5788	5891	6046	6130	6256	6130	5994
896101	5796	6355	6427	6536	6552	6576	6583	6377
896102	4606	4882	4972	5108	5299	5586	5929	6042
896131	4423	4307	4948	5909	6841	8240	10509	11360
896132	50	51	51	51	51	51	51	51
896260	66	613	2225	4644	6890	10259	12846	13348
896270	43	58	78	108	133	170	229	268
896500	114	108	108	107	107	107	104	102
896510	0	0	243	607	935	1427	1720	1913
896520	1192	1018	1313	1756	2222	2922	2999	3303
896530	3221	3437	3490	3570	3728	3966	3923	3914
896540	6	1645	2263	3189	3795	4705	5776	6104
896550	0	0	0	0	0	0	0	0
SUBTOTAL	32,202	37,402	41,628	47,968	54,200	63,547	70,834	74,424

Subarea 14b - Morrison Creek/South

896410	120	129	136	147	151	157	164	184
896560	40	347	1540	3330	4560	6405	10233	11978
SUBTOTAL	160	476	1,676	3,477	4,711	6,562	10,397	12,162

TOTAL

366,260	382,876	393,244	408,795	421,641	440,911	486,195	550,622
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GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL HOUSING

	1988	1990	1992	1995	1997	2000	2005	2010
Subarea 1 - Natomas								
570100	631	649	653	658	662	667	676	729
570110	485	497	502	510	580	685	765	961
570200	1218	1228	1269	1330	1377	1447	1570	1596
570210	66	38	30	19	11	0	0	0
570220	0	0	0	0	0	0	0	0
570230	555	923	988	1085	1213	1405	1405	1405
570240	0	0	0	0	120	300	335	335
570250	2942	3070	3158	3290	3350	3440	3460	3440
570261	1493	1517	1580	1675	1675	1675	1675	1675
570262	2407	2408	2408	2408	2408	2408	2408	2408
570300	5	5	5	5	5	5	1100	2247
570310	5	3	3	3	3	2	900	2108
570320	2	1	1	1	1	1	350	2560
570330	163	166	166	167	297	493	938	1634
570340	1	0	0	0	0	0	0	0
570350	4	3	2	0	0	0	0	0
570360	11	11	11	11	11	11	11	13
570370	2515	2515	2515	2515	2515	2515	2515	2515
570400	10	10	10	10	10	10	10	10
570410	3	108	185	300	348	420	550	629
570420	225	628	905	1321	1565	1930	2040	2072
570430	78	80	81	83	84	85	92	97
570440	23	22	22	23	23	23	23	23
570450	50	49	49	49	49	50	51	54
571100	123	124	126	128	129	130	705	1585
571110	0	0	0	0	0	0	1900	4036
571120	1	1	1	1	1	1	301	732
571130	1	1	1	1	1	1	750	2298
571140	0	0	0	0	0	0	750	4272
571150	0	0	0	0	0	0	1600	3536
571160	0	2	2	3	3	4	1100	3403
571170	4	4	4	4	4	4	600	1593
571200	2	3	3	4	4	4	4	4
571210	4	2	2	1	1	1	1	1
571220	22	23	23	23	23	23	23	23
571230	0	0	0	0	0	0	0	0
571240	7	8	8	9	9	9	9	9
571250	25	23	23	22	22	21	20	19
571300	1	1	1	0	0	0	0	0
571310	5	5	5	5	5	5	5	5
571320	1	0	0	0	0	0	0	0
571330	5	5	5	5	5	5	5	1183
571340	5	5	5	5	5	5	5	5
571350	40	35	35	35	34	33	32	32
571360	76	77	77	78	79	81	83	84
SUBTOTAL	13,214	14,250	14,865	15,787	16,632	17,899	28,767	49,331
Subarea 2 - Rio Linda								
572120	294	319	328	342	351	365	385	409
572330	154	154	154	155	155	156	159	162
572340	517	523	581	669	674	681	712	818
572350	158	170	185	208	268	358	403	501
572360	166	233	289	373	392	421	476	519
572380	27	30	30	31	32	33	34	36
572420	257	390	426	481	518	573	753	1663
SUBTOTAL	1,573	1,819	1,995	2,259	2,390	2,587	2,922	4,108
Subarea 3 - North Sacramento								

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL HOUSING

	1988	1990	1992	1995	1997	2000	2005	2010
565000	1095	1121	1132	1148	1194	1263	1413	1848
565010	312	622	732	897	1187	1623	2555	3686
566000	835	891	906	929	944	966	999	1192
566010	1336	1382	1391	1404	1443	1502	1666	1876
567000	592	674	689	711	725	747	1300	2712
567010	1045	1213	1243	1289	1319	1364	2385	4557
567020	1211	1282	1329	1400	1427	1468	1535	1857
567030	360	394	428	478	512	562	1572	3086
568000	1790	1795	1809	1831	1851	1881	1969	2118
568010	665	665	665	666	670	677	678	680
569000	650	651	651	651	651	651	651	651
569010	531	532	532	532	532	532	532	532
569020	373	373	373	373	373	373	373	373
569030	0	0	0	0	0	0	0	0
569040	494	519	546	587	598	614	641	670
569050	290	288	288	288	288	288	288	289
SUBTOTAL	11,579	12,402	12,715	13,184	13,715	14,511	18,557	26,127
Subarea 4 - North Downtown								
953000	330	340	340	340	340	340	340	340
953010	7	7	7	7	7	7	7	7
953021	33	33	33	33	33	33	33	33
953022	8	9	9	9	9	9	9	9
SUBTOTAL	378	389	389	389	389	389	389	389
Subarea 5 - Downtown								
702000	1787	1786	1786	1786	1786	1786	1786	1786
703000	1580	1580	1582	1584	1584	1584	1584	1584
715000	1189	1192	1194	1196	1197	1198	1199	1200
715010	1168	1169	1169	1170	1170	1170	1170	1170
716000	698	698	699	700	700	701	701	701
716010	669	673	675	678	678	678	678	682
716020	551	550	550	550	550	550	550	550
716030	656	657	657	657	657	657	657	658
716021	619	619	619	619	619	619	619	619
716022	888	888	889	890	890	890	890	890
718001	714	721	732	748	751	756	765	773
727000	1586	1587	1588	1589	1590	1591	1597	1603
728000	1179	1181	1182	1184	1186	1190	1192	1194
822000	852	852	852	852	852	852	856	860
822011	632	632	632	632	632	632	632	632
822012	336	336	336	336	336	336	336	336
823000	1672	1672	1672	1672	1672	1672	1672	1672
824000	372	372	376	381	385	392	404	411
824010	1741	1741	1742	1743	1743	1744	1745	1745
824020	0	0	0	0	0	0	0	0
825000	733	732	732	732	732	732	732	732
826000	1277	1277	1277	1277	1277	1277	1277	1277
833000	622	622	623	624	624	625	628	630
833010	1286	1287	1289	1293	1294	1296	1300	1303

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL HOUSING

	1988	1990	1992	1995	1997	2000	2005	2010
835100	1266	1265	1265	1265	1265	1265	1265	1265
836000	1021	1049	1060	1077	1101	1137	1194	1248
839000	680	682	683	685	687	691	697	703
839010	490	495	497	499	502	506	514	519
839020	531	531	531	531	531	531	531	531
904000	2395	2394	2394	2394	2394	2394	2394	2394
905000	1986	1990	2003	2023	2042	2071	2118	2165
906000	653	675	675	676	680	687	688	688
907000	290	315	315	315	315	315	315	315
908000	1139	1139	1139	1139	1139	1139	1139	1139
909000	180	180	180	180	180	180	180	180
910000	84	84	84	84	84	84	84	84
911001	647	678	694	719	734	756	793	832
911002	252	252	252	252	252	252	252	252
912000	2258	2260	2260	2261	2261	2262	2264	2267
913000	2124	2124	2124	2124	2124	2124	2122	2122
914000	1681	1678	1678	1678	1678	1678	1678	1678
919000	1746	1750	1750	1750	1751	1752	1752	1752
920000	1399	1399	1399	1400	1400	1400	1401	1401
921000	431	533	567	618	651	701	774	774
921010	663	664	664	664	664	664	664	665
SUBTOTAL	44,723	44,961	45,067	45,227	45,343	45,517	45,789	45,982
Subarea 6 - River Park								
701000	1702	1702	1702	1702	1702	1702	1702	1703
752100	111	111	111	111	111	111	111	111
SUBTOTAL	1,813	1,813	1,813	1,813	1,813	1,813	1,813	1,814
Subarea 7 - Campus Commons								
654100	1278	1278	1278	1278	1278	1278	1278	1278
654110	1764	1764	1764	1764	1764	1764	1764	1764
654120	380	378	378	378	378	378	378	378
654130	758	761	766	773	778	785	797	809
654200	835	834	834	833	833	833	833	835
654210	9	9	9	9	9	9	9	9
654220	1	1	1	0	0	0	0	0
654230	526	630	630	630	630	630	630	630
655200	0	0	0	0	0	0	0	0
655210	80	88	89	90	91	93	94	97
655220	2044	2082	2088	2096	2102	2110	2123	2137
655300	1387	1447	1469	1501	1527	1566	1566	1566
655310	1315	1340	1350	1365	1375	1391	1531	1529
655320	612	683	695	713	725	743	781	801
655400	3204	3313	3340	3391	3414	3463	3463	3546
655410	1978	2005	2013	2026	2035	2048	2067	2067

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL HOUSING

	1988	1990	1992	1995	1997	2000	2005	2010
656120	1183	1183	1183	1183	1183	1183	1183	1183
565200	1308	1328	1336	1348	1356	1368	1388	1388
656210	428	427	427	427	427	427	427	427
656220	1611	1611	1643	1690	1690	1690	1690	1690
658210	510	509	509	509	509	509	509	509
658200	787	787	789	792	797	805	817	832
658230	641	693	693	693	693	693	693	693
678030	0	0	0	0	0	0	0	0
662200	1198	1202	1209	1220	1236	1259	1266	1299
SUBTOTAL	23,837	24,353	24,491	24,699	24,829	25,025	25,287	25,467
Subarea 8 - Perkins								
752110	966	966	966	966	966	966	966	966
752200	826	826	826	826	826	826	826	826
752210	623	623	623	623	623	623	623	623
752300	7	7	7	7	7	7	7	7
752330	1890	1889	1889	1889	1889	1889	1889	1889
752340	1147	1157	1161	1168	1171	1175	1180	1187
SUBTOTAL	5,459	5,468	5,472	5,479	5,482	5,486	5,491	5,498
Subarea 9 - La Riviera								
791100	3187	3187	3187	3187	3187	3187	3187	3187
791110	771	805	819	839	843	849	860	862
791120	444	548	548	548	548	548	548	548
791200	798	798	798	798	798	798	798	798
SUBTOTAL	5,200	5,338	5,352	5,372	5,376	5,382	5,393	5,395
Subarea 10 - Pocket								
834000	1267	1267	1267	1268	1268	1268	1268	1268
834010	442	445	446	447	449	452	453	453
840100	1239	1241	1242	1243	1244	1245	1248	1260
840110	752	754	756	758	760	762	768	770
840120	760	801	817	840	850	864	888	911
840200	2687	2718	2732	2753	2767	2788	2826	2856
840210	1526	1528	1529	1530	1530	1531	1543	1552
840300	2422	2450	2461	2478	2489	2505	2513	2513
840310	1185	1186	1187	1188	1188	1189	1191	1191
840320	1991	2039	2058	2087	2106	2135	2304	2349
840330	1533	1550	1557	1567	1574	1584	1601	1690
840340	480	878	1030	1258	1457	1755	1806	1834
SUBTOTAL	16,284	16,857	17,081	17,417	17,681	18,078	18,409	18,647
Subarea 11 - Meadowview								
835200	1316	1318	1318	1318	1318	1318	1318	1318
838100	1	1	1	1	1	1	1	1
838110	170	170	170	170	170	170	170	170
838120	1380	1380	1380	1380	1380	1380	1380	1380
838130	256	256	256	256	256	256	256	256
838140	0	0	0	0	0	0	0	0
841000	865	970	1015	1083	1187	1342	1532	1696
841010	533	533	534	536	540	547	559	569
842100	1710	1727	1739	1758	1768	1783	1805	1813
842200	1628	1631	1646	1668	1684	1709	1929	1945

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL HOUSING

	1988	1990	1992	1995	1997	2000	2005	2010
842300	1354	1374	1402	1445	1487	1551	1799	1966
845000	589	715	752	808	844	899	924	957
845010	1114	1116	1118	1120	1122	1126	1127	1128
845020	605	631	643	660	660	660	660	660
845030	580	644	676	725	748	782	823	843
849120	1922	2072	2199	2389	2436	2506	2537	2566
SUBTOTAL	14,023	14,538	14,850	15,317	15,602	16,030	16,820	17,268
Subarea 12+ - Florin								
731100	1268	1269	1270	1271	1275	1282	1286	1288
732100	1736	2109	2359	2734	2984	3359	3985	4610
732200	1608	1712	1764	1842	1895	1974	2105	2236
746100	2303	2325	2351	2390	2460	2564	2736	2910
747000	1543	1899	1931	1980	1982	1986	1986	1985
747010	441	459	555	699	709	723	723	723
747020	437	436	436	436	436	436	436	436
849100	0	0	0	0	0	0	0	0
SUBTOTAL	9,336	10,209	10,666	11,352	11,741	12,324	13,257	14,188
Subarea 13 - Granite Park								
751180	1	1	1	0	0	0	0	0
752310	7	7	7	7	7	7	7	7
752320	22	22	22	22	22	22	22	22
752350	21	15	13	11	10	9	9	9
752360	10	10	10	10	10	10	10	10
752380	3	3	3	3	3	3	3	3
752390	72	72	72	72	72	72	72	72
SUBTOTAL	136	130	128	125	124	123	123	123
Subarea 14a - Morrison Creek/North								
843000	1111	1346	1434	1567	1735	1986	2278	2831
843010	463	466	473	484	504	534	605	669
849200	541	1191	1318	1508	1803	2245	2403	2515
849210	1927	2059	2109	2184	2224	2285	2290	2304
896101	2287	2328	2344	2368	2384	2409	2458	2459
896102	1859	1923	1947	1984	2080	2224	2434	2526
896131	1545	1655	1905	2280	2702	3334	4320	4790
896132	16	16	16	16	16	16	16	16
896260	24	228	836	1749	2618	3921	5103	5529
896270	17	23	33	48	58	73	98	116
896500	67	67	67	67	67	67	67	67
896510	0	0	98	246	381	584	712	816
896520	314	323	420	566	724	960	1038	1198
896530	1054	1128	1150	1182	1245	1340	1415	1450
896540	3	665	899	1251	1489	1847	2366	2570
896550	0	0	0	0	0	0	0	0
SUBTOTAL	11,228	13,418	15,051	17,500	20,030	23,825	27,603	29,856
Subarea 14b - Morrison Creek/South								
896410	55	57	60	65	67	70	74	85
896560	9	114	534	1164	1598	2250	3745	4578
SUBTOTAL	64	171	594	1,229	1,665	2,320	3,819	4,663
TOTAL	158,847	166,116	170,529	177,149	182,813	191,309	214,439	248,856

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL EMPLOYMENT

	Base Year - 1985				Future Year - 2010			
	Acres	Retail	Non-Ret	Total	Acres	Retail	Non-Ret	Total

Subarea 1 - Natomas

570,100	331	53	250	303	330.7	60	346	406
570,110	451	83	412	495	451.3	617	3,152	3,769
570,200	344	70	95	165	344.2	350	1,043	1,393
570,210	571	3	5	8	571.0	3	5	8
570,220	215	6	712	718	214.8	180	6,335	6,515
570,230	340	1	40	41	339.9	139	7,349	7,488
570,240	199	1	1	2	199.2	0	5,279	5,279
570,250	546	8	95	103	546.3	173	375	548
570,261	371	15	289	304	370.5	130	860	990
570,262	435	11	146	157	434.9	11	146	157
570,300	608	1	15	16	607.8	0	4,365	4,365
570,310	698	1	1	2	697.7	190	3,758	3,948
570,320	495	1	220	221	494.8	380	2,212	2,592
570,330	320	1	22	23	319.5	101	2,535	2,636
570,340	735	28	35	63	734.6	190	7,367	7,557
570,350	890	1	55	56	889.6	203	6,500	6,703
570,360	544	15	1750	1,765	544.4	0	5,354	5,354
570,370	734	128	38	166	734.4	487	4,464	4,951
570,400	947	165	74	239	946.6	165	74	239
570,410	129	1	1	2	128.5	317	0	317
570,420	504	27	7	34	504.1	309	1,795	2,104
570,430	640	1	1	2	640.0	0	2	2
570,440	481	1	5	6	480.6	0	6	6
570,450	1,045	1	1	2	1,044.6	0	2	2
571,100	516	1	49	50	515.9	0	50	50
571,110	539	1	1	2	539.2	0	2	2
571,120	554	1	1	2	554.4	193	398	591
571,130	517	1	1	2	516.8	0	2,449	2,449
571,140	360	1	1	2	359.9	63	3,901	3,964
571,150	780	1	1	2	780.3	317	636	953
571,160	591	1	1	2	590.7	0	2	2
571,170	397	1	10	11	396.6	7	226	233
571,200	2,105	1	1	2	2,104.9	0	2	2
571,210	2,530	1	48	49	2,529.6	98	677	775
571,220	1,479	1	1	2	1,478.9	0	2	2
571,230	1,902	1	1	2	1,902.1	0	0	0
571,240	2,704	1	1	2	2,703.5	0	2	2
571,250	1,832	1	59	60	1,832	0	60	60
571,300	2,708.1	200	800	1,000	2,708.1	250	1,600	1,850
571,310	618.7	1	2	3	618.7	98	631	729
571,320	616.7	1	1	2	616.7	1	1	2
571,330	742.5	1	15	16	742.5	190	966	1,156
571,340	681.1	1	1	2	681.1	0	2	2
571,350	2,069.3	1	4	5	2,069.3	0	5	5
571,360	2,318.0	1	80	81	2,318.0	0	80	80
SUBTOTAL	39,129	843	5,349	6,192	39,128.8	5,222	75,016	80,238

Subarea 2 - Rio Linda

572,120	1,467.6	8	142	150	1,467.6	18	272	290
572,330	428.3	8	150	158	428.3	10	200	210
572,340	322.1	1	5	6	322.1	0	6	6
572,350	282.0	1	5	6	282.0	1	5	6
572,360	276.7	1	3	4	276.7	4	18	22
572,380	235.9	79	6	85	235.9	81	46	127
572,420	956.5	15	569	584	956.5	198	844	1,042
SUBTOTAL	3,969	113	880	993	3,969.1	312	1,391	1,703

Subarea 3 - North Sacramento

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL EMPLOYMENT

	Base Year - 1985				Future Year - 2010			
	Acres	Retail	Non-Ret	Total	Acres	Retail	Non-Ret	Total
565,000	402.4	55	580	635	402.4	208	825	1,033
565,010	544.7	36	85	121	544.7	284	708	992
566,000	217.0	27	215	242	217.0	27	299	326
566,010	325.2	86	220	306	325.2	102	498	600
567,000	292.0	5	79	84	292.0	139	1,298	1,437
567,010	655.5	83	106	189	655.5	0	3,556	3,556
567,020	525.7	40	755	795	525.7	211	2,211	2,422
567,030	306.1	99	102	201	306.1	99	102	201
568,000	491.7	27	406	433	491.7	90	505	595
568,010	86.9	110	135	245	86.9	331	1,128	1,459
569,000	103.7	320	940	1,260	103.7	517	1,070	1,587
569,010	135.2	403	453	856	135.2	403	453	856
569,020	178.8	1	1625	1,626	178.8	101	2,658	2,759
569,030	496.3	40	975	1,015	496.3	253	4,336	4,589
569,040	104.7	35	142	177	104.7	35	192	227
569,050	146.9	85	270	355	146.9	159	501	660
SUBTOTAL	5,013	1,452	7,088	8,540	5,012.8	2,959	20,340	23,299
Subarea 4 - North Downtown								
953,000	356.1	295	5200	5,495	356.1	473	8,505	8,978
953,010	389.1	1	4	5	389.1	125	1,383	1,508
953,021	403.6	300	2950	3,250	403.6	565	5,960	6,525
953,022	276.4	4	300	304	276.4	0	2,644	2,644
SUBTOTAL	1,425	600	8,454	9,054	1,425.2	1,163	18,492	19,655
Subarea 5 - Downtown								
702,000	309.4	85	1825	1,910	309.4	188	2,239	2,427
703,000	369.4	100	350	450	369.4	153	684	837
715,000	249.1	300	915	1,215	249.1	328	987	1,315
715,010	164.0	80	2,600	2,680	164.0	380	3,100	3,480
716,000	180.5	109	280	389	180.5	306	104	410
716,010	276.8	400	1800	2,200	276.8	532	1,641	2,173
716,020	155.8	6	330	336	155.8	53	363	416
716,030	119.2	140	235	375	119.2	140	235	375
716,021								0
716,022								0
718,001	198.0	25	1000	1,025	198.0	60	1,120	1,180
727,000	300.5	100	855	955	300.5	150	1,284	1,434
728,000	221.3	35	103	138	221.3	481	120	601
822,000	240.4	42	74	116	240.4	42	74	116
822,011	152.1	15	300	315	152.1	25	330	355
822,012	187.9	45	287	332	187.9	0	1,537	1,537
823,000	298.8	450	305	755	298.8	587	147	734
824,000	337.0	15	220	235	337.0	15	220	235
824,010	351.0	140	480	620	351.0	258	287	545
824,020	54.5	1	785	786	54.5	0	675	675
825,000	228.6	12	800	812	228.6	200	1,904	2,104
826,000	219.3	110	5,000	5,110	219.3	237	5,000	5,237
833,000	212.5	1	112	113	212.5	1	150	151
833,010	343.3	486	121	607	343.3	486	121	607

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL EMPLOYMENT

	Base Year - 1985				Future Year - 2010			
	Acres	Retail	Non-Ret	Total	Acres	Retail	Non-Ret	Total
835,100	276.0	160	812	972	276.0	317	1,060	1,377
836,000	304.5	260	360	620	304.5	466	951	1,417
839,000	236.4	12	144	156	236.4	24	144	168
839,010	158.8	1	1	2	158.8	5	0	5
839,020	169.8	8	130	138	169.8	5	87	92
904,000	249.5	200	1200	1,400	249.5	60	1,361	1,421
905,000	219.2	95	3000	3,095	219.2	122	3,347	3,469
906,000	106.2	35	2,400	2,435	106.2	155	3,546	3,701
907,000	129.8	2,100	4400	6,500	129.8	2,992	7,336	10,328
908,000	137.9	2,800	60	2,860	137.9	296	5,868	6,164
909,000	89.1	210	13500	13,710	89.1	210	13,500	13,710
910,000	91.1	1,850	6500	8,350	91.1	844	10,059	10,903
911,001	92.4	600	2632	3,232	92.4	600	2,632	3,232
911,002	123.2	350	2900	3,250	123.2	565	5,826	6,391
912,000	172.4	283	2107	2,390	172.4	485	2,105	2,590
913,000	197.3	248	4420	4,668	197.3	248	4,420	4,668
914,000	195.0	400	3000	3,400	195.0	806	2,513	3,319
919,000	278.1	250	900	1,150	278.1	407	2,303	2,710
920,000	261.2	350	2700	3,050	261.2	675	2,595	3,270
921,000	277.2	114	569	683	277.2	406	1,764	2,170
921,010	144.6	50	450	500	144.6	124	2,144	2,268
SUBTOTAL	9,079	13,073	70,962	84,035	9,079.1	14,434	95,883	110,317
Subarea 6 - River Park								
701,000	505.6	32	80	112	505.6	32	50	82
752,100	369.9	30	3046	3,076	369.9	304	2,772	3,076
SUBTOTAL	876	62	3,126	3,188	875.5	336	2,822	3,158
Subarea 7 - Campus Commons								
654,100	228.0	35	1580	1,615	228.0	0	3,595	3,595
654,110	584.9	215	753	968	584.9	1,178	553	1,731
654,120	198.0	10	320	330	198.0	10	320	330
654,130	294.4	60	1317	1,377	294.4	62	1,340	1,402
654,200	391.2	455	2100	2,555	391.2	969	10,440	11,409
654,210	826.4	1	700	701	826.4	0	700	700
654,220	120.7	36	312	348	120.7	37	317	354
654,230	141.4	90	560	650	141.4	166	908	1,074
655,200	155.8	1,928	625	2,553	155.8	2,100	789	2,889
655,210	203.0	158	1850	2,008	203.0	313	3,019	3,332
655,220	303.9	695	1100	1,795	303.9	775	4,194	4,969
655,300	289.2	290	1400	1,690	289.2	543	1,524	2,067
655,310	242.4	725	395	1,120	242.4	756	489	1,245
655,320	249.7	250	420	670	249.7	260	438	698
655,400	246.0	50	225	275	246.0	50	225	275
655,410	245.1	500	1700	2,200	245.1	653	1,769	2,422

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL EMPLOYMENT

	Base Year - 1985				Future Year - 2010			
	Acres	Retail	Non-Ret	Total	Acres	Retail	Non-Ret	Total
656,120	325.0	625	3,000	3,625	325.0	636	3,002	3,638
656,200	353.1	15	205	220	353.1	23	210	233
656,210	364.8	17	150	167	364.8	20	160	180
656,220	325.9	450	275	725	325.9	471	297	768
658,210	411.5	3	163	166	411.5	3	163	166
658,200	397.5	30	230	260	377.3	30	230	260
658,230	536.8	40	130	170	536.8	40	130	170
678,030	398.4	9	30	39	398.4	9	30	39
662,200	203.8	145	215	360	203.8	250	305	555
SUBTOTAL	8,037	6,832	19,755	26,587	8,016.7	9,354	35,147	44,501
Subarea 8 - Perkins								
752,110	114.9	27	135	162	114.9	74	135	209
752,200	208.8	1	8	9	208.8	0	8	8
752,210	220.4	1	15	16	220.4	0	15	15
752,300	48.0	10	412	422	48.0	55	681	736
752,330	372.3	105	310	415	372.3	855	633	1,488
752,340	324.4	50	350	400	324.4	383	1,846	2,229
SUBTOTAL	1,289	194	1,230	1,424	1,288.8	1,367	3,318	4,685
Subarea 9 - La Riviera								
791,110	248.9	1	1	2	248.9	1	1	2
791,120	276.1	45	700	745	276.1	96	909	1,005
791,200	148.6	89	160	249	148.6	328	1,033	1,361
SUBTOTAL	674	135.0	861.0	996	673.6	425	1,943	2,368
Subarea 10 - Pocket								
834,000	377.0	359	90	449	377.0	359	90	449
834,010	167.0	110	300	410	167.0	380	407	787
840,100	224.5	1	32	33	224.5	0	32	32
840,110	223.0	80	230	310	223.0	125	294	419
840,120	329.9	3	60	63	329.9	296	1,288	1,584
840,200	545.3	75	173	248	545.3	90	198	288
840,210	547.6	8	225	233	547.6	0	195	195
840,300	835.5	50	108	158	835.5	61	278	339
840,310	302.3	1	1	2	302.3	0	0	0
840,320	701.5	1	1	2	701.5	127	32	159
840,330	453.3	315	730	1,045	453.3	433	3,114	3,547
840,340	504.0	8	70	78	504.0	52	147	199
SUBTOTAL	5,211	1,011	2,020	3,031	5,210.9	1,923	6,075	7,998
Subarea 11 - Meadowview								
835,200	303.4	392	467	859	303.4	489	410	899
838,100	528.7	0	400	400	528.7	0	400	400
838,110	87.6	1	571	572	87.6	42	581	623
838,120	309.1	45	183	228	309.1	69	192	261
838,130	127.9	35	130	165	127.9	0	190	190
838,140	134.9	1	3	4	134.9	0	15	15
841,000	325.1	145	425	570	325.1	244	547	791
841,010	150.1	120	455	575	150.1	180	557	737
842,100	115.0	2	150	152	115.0	234	758	992
842,200	401.0	45	380	425	401.0	111	456	567

GROWTH PROJECTIONS WITHIN THE 100-YEAR FLOOD PLAIN

TOTAL EMPLOYMENT

	Base Year - 1985				Future Year - 2010			
	Acres	Retail	Non-Ret	Total	Acres	Retail	Non-Ret	Total
842,300	387.2	211	327	538	387.2	566	825	1,391
845,000	289.5	247	1709	1,956	289.5	296	2,054	2,350
845,010	331.3	639	3411	4,050	331.3	672	3,811	4,483
845,020	195.1	89	2600	2,689	195.1	102	2,625	2,727
845,030	229.8	70	150	220	229.8	142	624	766
849,120	418.4	400	322	722	418.4	576	472	1,048
SUBTOTAL	4,334	2,442	11,683	14,125	4,334.1	3,723	14,517	18,240

Subarea 12 - Florin

731,100	292.4	65	350	415	292.4	253	93	346
732,100	600.5	60	255	315	600.5	244	411	655
732,200	389.5	95	350	445	389.5	351	1,488	1,839
746,100	561.5	450	440	890	561.5	885	1,494	2,379
747,000	383.9	70	355	425	383.9	297	1,628	1,925
747,010	192.9	2,500	350	2,850	192.9	2,582	359	2,941
747,020	142.7	13	75	88	142.7	13	75	88
849,100	52.3	420	750	1,170	52.3	420	750	1,170
SUBTOTAL	2,616	3,673	2,925	6,598	2,615.7	5,045	6,298	11,343

Subarea 13 - Granite Park

751,180	139.4	147	1229	1,376	139.4	147	1,229	1,376
752,310	187.0	45	950	995	187.0	21	2,872	2,893
752,320	308.9	25	85	110	308.9	0	4,635	4,635
752,350	333.3	40	712	752	333.3	315	3,505	3,820
752,360	434.9	8	56	64	434.9	0	6,174	6,174
752,380	307.0	70	1500	1,570	307.0	0	5,249	5,249
752,390	12.0	29	1425	1,454	12.0	0	6,020	6,020
SUBTOTAL	1,723	364	5,957	6,321	1,722.5	483	29,684	30,167

Subarea 14a - Morrison Creek/North

843,000	553.0	60	315	375	553.0	60	315	375
843,010	273.0	25	450	475	273.0	232	1,090	1,322
				0				0
849,200	229.4	1	1	2	229.4	90	450	540
849,210	364.8	367	130	497	364.8	844	911	1,755
896,101	513.8	1	49	50	513.8	321	80	401
896,102	566.0	365	1450	1,815	566.0	509	2,577	3,086
896,131	1,228.8	5	89	94	1,228.8	265	451	716
896,132	215.4	30	350	380	215.4	0	380	380
896,260	881.5	1	5	6	881.5	15	261	276
896,270	665.7	1	6	7	665.7	1,593	3,553	5,146
896,500	977.9	4	65	69	977.9	359	3,341	3,700
896,510	337.0	1	1	2	337.0	435	12,558	12,993
896,520	539.0	1	25	26	539.0	0	26	26
896,530	409.5	1	1	2	409.5	153	213	366
896,540	835.6	1	1	2	835.6	0	0	0
896,550	1,636.2	1	210	211	1,636.2	1	235	236
SUBTOTAL	10,227	865	3,148	4,013	10,226.6	4,877	26,441	31,318

Subarea 14b - Morrison Creek/South

896,410	1,961.8	1	1	2	1,961.8	535	1,814	2,349
896,560	1,830.8	1	1	2	1,830.8	0	0	0
SUBTOTAL	3,793	2	2	4	3,792.6	535	1,814	2,349

TOTAL

97,392 31,661 143,440 175,101 97,372.0 52,158 339,181 391,339



Winncrest
Homes

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Planning and Development

LETTER 5

October 30, 1989

Ms. Barbara L. Wendt
City of Sacramento
Environmental Division
1231 I Street, Room 300
Sacramento, CA 95814

RE: COMMENTS ON EIR #P89-M89-054

Dear Ms. Wendt:

5-1

Having reviewed the draft EIR for the land use planning policy within the hundred year flood plain, we feel that while the proposed land use policy is not consistent with the City General Plan policies related to flooding, that measures which have been adopted by both the City Council and the County Board of Supervisors will serve as mitigation measures. Specifically, the Land Use Policy which allows appropriate development in areas subject to 100 year flooding will also require that residential structures are built in accordance with US Army Corp of Engineers standards and that flood insurance be secured by homeowners.

5-2

Additionally, the developers of such properties will execute agreements which indemnify the City of Sacramento for any liability related to flooding while the various levee improvements and flood control measures are being constructed. Toward this purpose, the local development community, title insurance industry, and real estate industry have made firm and absolute commitments to work toward the timely implementation of these flood notification measures.

5-3

Property owners are also aware of the balance that must be maintained between appropriate development and building restrictions. Flood control financing may very well require the taxation of various properties through assessment districts which are created in effected areas. It is very likely that the capital necessary to construct certain flood control measures will come from the very development that must be conditionally allowed to take place in areas subject to the modified 100 year flood plain.

5-4

Consequently, we would recommend a City General Plan modification to redefine those areas subject to reasonable risk of flooding. In order to reduce inconsistencies within the City General Plan, this redefinition would effectively recognize that development activity should not come to a complete halt in areas subject to flooding, but that specific projects identify the inherent hazard of flooding and work toward an immediate solution.

Page 2

We appreciate your consideration of this E.I.R. comment and look forward to our continued participation in developing the land use planning policy for Sacramento.

Sincerely,

WINNCREST HOMES, INC.


Michael J. Winn

MJW/csp

LETTER 5

Response to Comment 5-1

The commentor has suggested that actions have been taken by the City Council and the Board of Supervisors which will require residential structures built within the 100-year flood plain to meet standards from the USCOE and to be covered by flood insurance, and that these actions will mitigate the potential inconsistency between the Proposed Land Use Policy, the City General Plan, and the County General Plan.

As of this date, neither the City Council nor the Board of Supervisors has taken any actions which mitigates the impacts due to the 100-year flood, as described in the Draft EIR. The City Council and the Board of Supervisors will take final action to determine consistency or inconsistency with their respective General Plan documents. The statements as to consistency or inconsistency with the City and the County General Plans included in the Draft EIR are the opinions of the EIR preparers based on their reading and evaluation of the Proposed Land Use Policy and the respective general plan documents. However, the interpretation of the general plan is ultimately the responsibility of the local representative body, the City Council or the Board of Supervisors.

The Addendum to the EIR, included in Chapter 2 of this document, presents a different approach to the issue of general plan consistency compared to that used in the DEIR. In that new approach, prepared by the City of Sacramento, City Attorney's Office, the City Attorney presents information and argues that the policy is consistent with the General Plan.

The EIR concludes by suggesting a possible new approach to the Land Use Policy which would result in a de facto moratorium on residential development in Natomas until the levee stabilization project is completed, with little or no restrictions on development in other parts of the flood plain. The Addendum suggests that the City Council could find this new approach consistent with the flood hazard policies of the City General Plan. The City Council and the Board of Supervisors have taken action to require a notification and waiver process for all developers and new homeowners within the 100-year flood plain. Further, the City Council has taken action to clarify that the City's Flood Plain Management regulations do not apply to the A-99 zone which constitutes the new 100-year flood plain.

The USCOE does not set standards for flood plain development. The Federal Emergency Management Agency (FEMA) has development standards for all parts of the 100-year flood plain and these standards are reflected in the City's and the County's Flood Plain Management regulations. The Special Legislation restricted FEMA's ability to implement such standards in the Sacramento area and placed with the City and the County the

authority to regulate development in the new 100-year flood plain. The proposed Land Use Policy is the City's and the County's proposed development regulations for this area.

Finally, the City and the County do not require the purchase of flood insurance. Such a requirement is made by FEMA through its implementation of the National Flood Insurance Program (NFIP), and/or by lenders who are subject to Federal requirements due to use of FHA/VA loan programs, federal savings and loan insurance programs, or participation in federal secondary lending markets. The Special Legislation restricted FEMA's ability to implement an actuarial-based fee structure for flood insurance in the newly identified flood prone areas. Rather, property owners will be able to receive flood insurance at the rate structure which was in effect as of October 1988. However, it should be made clear that the requirement for flood insurance comes from the NFIP, not the City or the County.

Response to Comment 5-2

Comment noted.

Response to Comment 5-3

The commentor addresses the question of whether or not additional development in the flood plain is required to finance necessary flood protection improvements. Since the final flood protection solution has not yet been identified, it is difficult to accurately respond to this issue. However, based on standard approaches to benefit assessment and financing, growth projections indicate that there would be only a marginal effect of new development on the direct financial base for the flood protection effort, as discussed below.

The entire flood plain must be seen as the "area of benefit" for the certain large-scale elements of comprehensive flood protection improvements program such as additional upstream storage. More localized elements such as levee stabilization and/or levee raising may have a smaller, more focused "area of benefit." In 1988, there were a total of about 159,000 housing units and about 75 million square feet of non-residential development in the flood plain. Between 1988 and 1997 it is projected in the DEIR that there would be an additional 19,000 housing units and 30 million square feet of non-residential space added in the flood plain area. This would represent an increase of about 12 percent in housing units and 40 percent in non-residential square footage. Because assessments are generally based on parcels rather than intensity, the 12 percent increase in residential units is the more important figure as it is more representative of the proportional spread of the benefit of increased flood protection on a parcel basis. It is generally accepted that a 12 percent decrease in potential future assessments would not substantially change the ability of the local community to implement flood protection efforts.

It should be noted, however, that a wide range of economic implications are likely in the event of flood-related building restrictions. In general, the broader the restrictions (geographically) and the longer the term of such restrictions, the greater the likely economic impact. It is unlikely, however, that even under a citywide or countywide imposition of existing flood plain management regulations (which could result in a de facto moratorium over large portions of the 100-year flood plain over a longer period of time (for example, present through 1997) would disrupt the regional economy to the extent that the community's ability to implement flood protection improvements is hindered (see also Response to Comment 6-16).

Response to Comment 5-4

The Land Use Policy, as it was originally proposed and evaluated in the Draft EIR, was not consistent with the General Plan in the opinion of the preparers of the EIR. It should, however, be noted that determination of consistency or inconsistency with the General Plan is one which can only be made in a final form by the City Council. This is appropriate because the City Council (or the Board of Supervisors in the County) is responsible for approval and amendment of the General Plan. It has been brought to the attention of the EIR preparers that flexibility was built into the City General Plan flood hazard policy statements at the time of approval because not enough information was available about the extent of the flooding hazards in the City. (See Addendum to the EIR, contained in Chapter 2 of this document.) This flexibility, in fact, leaves to the Council the final interpretation of reasonable or unreasonable flood risk, based on the evidence before them at the time of the such a decision.

The City Attorney's office has prepared an Addendum to the EIR. The letter presents information to substantiate the City Attorney Office's position that there is not an unreasonable risk of flooding in all areas of the City, with the possible exception of residential development in Natomas. Further, the City Attorney has suggested an alternative approach to the Land Use Policy, which the City Attorney believes would be consistent with the City General Plan. The City Council will make a determination of consistency with the General Plan based on information contained in the Draft EIR, this Final EIR and any other information made available at the time of decision.

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Planning and Development

November 1, 1989

Barbara Wendt
Sacramento City Planning Department
1231 I St.
Sacramento, CA 95814

RE: Comments on the Draft Environmental Impact Report
for the Proposed Land Use Planning Policy Within the
100-Year Flood Plain

Dear Ms. Wendt,

These comments are joint comments of the Environmental Council of Sacramento, the Mother Lode Chapter of the Sierra Club, the American River Coalition, the Sacramento River Preservation Trust and the Planning and Conservation League on the Proposed Land Use Planning Policy Within the 100-Year Flood Plain and the Draft Environmental Impact Report (DEIR) for the Policy.

We believe that the proposed Land Use Planning Policy (Policy) is woefully inadequate. We believe that the City and County must delay development in the Natomas and Pocket Areas until the levees are stabilized. We support accelerating the schedule of levee stabilization in order to protect existing residents and to reduce the delay of new development. After the levees are stabilized, and prior to reaching the 100-year protection level, we believe that flood insurance should be mandatory. Our position is based on the risk to the public in the Natomas and Pocket Areas as described in the DEIR for the proposed Policy.

Our organizations strongly support the work of the City, County and the state and federal agencies in obtaining 100-year flood protection for the Sacramento area. We also supported the Special Legislation which

6-1

delays until 1992 application of the Federal Emergency Management Agency's flood plain maps while a program is put in place to provide the 100-year flood protection. Our support and, we believe, Congress' approval of the Legislation, was based on the City and County's commitments to guard against undue exposure to the risk of floods.

The proposed Policy was developed in response to the Legislation. After careful review of the description of the proposed Policy and its effects as described in the DEIR, we regret to say that the Policy is neither protective of the community nor consistent with the intent of the Special Legislation.

I. The Proposed Policy Would Increase Exposure to the Risk of Floods

The proposed Policy essentially ignores the risk to the public. Although the Policy in the abstract may appear restrictive, there are so many exemptions and qualifications that the Policy has no practical effect. This is admitted in the DEIR in the comparison of the proposed Policy with the "No Project Alternative" (ie. the situation that would exist if the City and County did not adopt the proposed policy.) "There would be no essential differences between impacts of this alternative and those described for the Proposed Land Use Policy." (page 128)

The proposed Policy completely fails to avoid undue exposure to the risk of floods by permitting significant development to occur on vacant land in high flood hazard areas. It is estimated in the DEIR (pg. 109-110) that as a result of implementation of the proposed Policy, one of every 220 people in the Natomas and Pocket Areas could die if the levees in those areas were to break during a 100-year flood. We understand from the Corps of Engineers that the potential loss of life in Natomas would remain essentially the same if the levees were to break during flood events that occur more frequently than once every 100-years. The Corps estimates that the Natomas areas levees could only withstand a 40-year flood event. The risk of a 40-year flood event occurring during the next 4 years is 9.6%. Therefore, to take Natomas as an example, by adopting the proposed Policy the City and County would be saying that it is acceptable to permit new residents in the Natomas area where they will have 1/220 risk of dying from a flood event that has a 9.6 % probability of occurring during the four years prior to levee stabilization. We frankly cannot imagine a scenario where a local government would find this level of risk

6-1 CONT.

acceptable.

The general standard for acceptable risk in air and water quality matters is 1 in a million chance of contracting cancer assuming a lifetime of exposure to the substance. Indeed, the City has sued the Central Valley Regional Water Quality Board for permitting levels of a rice herbicide, Bolero, in Sacramento's drinking water at a level which subjects its citizens to a risk of far less than 1 in a million. Because of its location, Sacramento will always be at some risk of flooding. However, the proposed Policy entails subjecting new residents to a risk far greater than what the City and County should accept. Adopting this proposed Policy would be gambling with people's lives.

The provisions in the proposed Policy requiring waivers from homeowners indicate that the City and County are unwilling to bet their treasuries on the possibility that a flood will not occur. The fact that the proposed Policy relieves the prior owner of the property of any obligation to indemnify the City and County indicates that the developers are not willing to risk their capital either. While requiring waivers may shield the City and County from economic responsibility for flood damages, it would not absolve the City and County of moral responsibility for permitting new development in advance of protection.

6-1 CONT.

The only justification given for taking the risks entailed by the proposed Policy is that the Policy would minimize disruption to the economic relationships necessary to sustain the high level, comprehensive flood protection effort. However, there is no analysis in the DEIR that permitting that level of development in a high hazard area is necessary to fund flood protection work. Indeed the City and County should consider the economic disruption that would result from potential flood damage to the development that would be allowed to proceed under the proposed Policy. If the Natomas levee were to break prior to stabilization as a result of a 100-year flood, not only would 17 additional lives be lost, but there would also be \$501 million in damage to structures which are present as a result of the proposed Policy. The property damage would not be significantly less if the flood was a 40-year event.

II. The Proposed Policy is Inconsistent with the Special Legislation

As part of its commitment to avoid undue exposure to the risk of floods, the City and the County also gave

6-1 CONT.

assurances to Congress that they would not designate any increases in urbanization beyond the General Plan as it existed at the time of passage of the legislation. Yet in the proposed Policy the County's commitment is reduced to one of complying with the County's pending General Plan update, which is not scheduled for completion until 1991. A commitment to comply with a General Plan not yet adopted is meaningless and constitutes a breach of faith with Congress and the community.

We have two other concerns regarding the terms of the proposed Policy. First, there is no discussion of why the Policy will be recommended for rescission when the levee stabilization contracts are awarded. The fact that contracts have been awarded does not affect the level of risk to which the people within the areas will be exposed. Second, the Policy does not expressly state how the City will decide on development requests for property under development agreements. It is stated that the requests will be reviewed on a case-by-case basis, but no criteria are given for the City's decision-making.

III. The DEIR on the Proposed Policy is Inadequate in its Description of the Project, the Existing Conditions, the Impacts of the Policy, the Mitigation, and the Alternatives.

A. The Project Description

6-2

The proposed Policy was developed in response to the Special Legislation. Yet in the DEIR (eg. Summary p. 9) the focus of the Legislation is changed from one of placing a moratorium on FEMA'S new flood plain maps to federal endorsement of new flood plain development in order to minimize economic disruption. Subsections 1085(c)(1)(F), (c)(1)(G) and (c)(1)(H) of the Legislation are virtually ignored. The description of the Special Legislation should be revised and the Legislation should be reprinted in full in an appendix to the EIR.

6-3

The EIR must also include an explanation of how the proposed Policy is responsive to the Special Legislation. In the DEIR it is stated that there are

6-4

several objectives in proposing the Policy yet only three are given (Summary, p.4.) How were the listed objectives derived? In order to evaluate the degree to which the alternatives meet the project objectives, those objectives must be clarified. In particular, the objective, "To comply with the intent and spirit of the Special Legislation" must be defined.

B. The Project Impacts

- 6-5 The EIR must include analyses of the impacts of the floods that could occur with the existing and post-levee stabilization levels of protection (40-year existing level of protection for Natomas; 50-year post levee stabilization level of protection for Natomas; and the 63-year current and post-stabilization level of protection for the remainder of the flood plain.) It is insufficient to simply say that the impacts of a flood that may occur under existing conditions will likely be less than, but not greater than, those described for the 100-year flood. We understand that the flood damages, both in loss of life and property damage, of a 40-year flood in Natomas and a 63-year flood in the Pocket Area would be very similar to the damages resulting from a 100-year flood in those areas.
- 6-6 The tables displaying the potential loss of life and property damage resulting from a 100-year flood are unclear (Tables 11, 12 and 13, pgs. 102, 109-110.) Tables 11 and 13 appear to indicate that when 100-year protection is achieved, the loss of life and damage to property will dramatically increase from post-levee stabilization levels. The assumptions made in calculating the risks should be clearly stated.
- 6-7 The EIR should also include a fuller discussion of and tabular display of the risks associated with the alternatives discussed in the DEIR and the risk associated with our proposed alternative, i.e. delaying development in the Natomas and Pocket Areas until the levees are stabilized. Additionally, to assist the City and County in evaluating the proposed Policy, the
- 6-8 EIR should include a discussion of the risks associated with other risk policies adopted by government agencies (e.g. Proposition 65 "no significant risk" levels, drinking water contaminant action levels.)
- 6-9 The discussion of the methodology used to determine the impacts of flooding on property (p. 101) is confusing. For example, it is stated "Effects of flooding on property would be greater in the Natomas area, as the level of flood protection in that area is currently 40-year protection." (p. 101). This makes no sense. Is not the extent of the damage to the property related to the depth of flooding in the area, the duration of the inundation of the property and the velocity of the floodwater, rather than to the frequency of the expected flood?
- 6-10 The EIR should include a discussion of the potential loss of life resulting from non-residential buildings.

6-10
CONT.

What is the basis for the estimate that there would be no loss of life as a result of non-residential development? The EIR should include an analysis of the number of people who would be in the high flood hazard area because of the non-residential development, the length of time they would be outside the building and the likelihood of a flood occurring during those time periods. There must also be a discussion of the

6-11

possibility of release of toxic materials during a flood, particularly those possibly released from non-residential facilities that would be constructed under the proposed policy.

C. Project Mitigation

6-12

The DEIR describes as "significant" the project impacts (growth in the flood plain) which are inconsistent with the flood plain regulations of the existing City and County General Plans. Proposed mitigation measures would "mitigate" the significant impacts by amending the General Plans to adopt the fiction that a flood hazard does not exist in areas where there is a known flood hazard (Measures 2 and 5.) We do not believe that amendment of the General Plan to ignore the existing physical conditions can properly be called "mitigation" under CEQA. Nevertheless, if these "mitigation measures" are adopted, will they also be rescinded at the time the Policy is rescinded?

D. Project Alternatives

6-13

The analysis of the alternatives in the DEIR is inadequate, in part because the objectives against which they are judged are not defined (see above.)

6-14

The EIR should include an analysis of delaying development in the high risk areas (Natomas and Pocket) until after levee stabilization is completed.

6-15

Additionally, the EIR should include an analysis of alternative, less dangerous sites for the new development. This could reduce the significant adverse impacts which might result from development in the flood plain yet still meet the economic goals of the project.

6-16

Finally, there is no substantiation for the assertion that the proposed Policy and its unavoidable adverse impacts are required to maintain the economic relationships necessary to fund 100-year flood protection. More evidence and discussion of this issue is needed. However, we question whether the economic interests could ever justify the level of risk that the proposed Policy would entail.

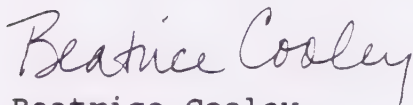
We appreciate the opportunity to comment on the Proposed Land Use Planning Policy and the DEIR. If you have any questions, please feel free to call Jennifer Jennings at the Planning and Conservation League.



Jennifer Jennings
Legal Affairs Director
Planning and Conservation League



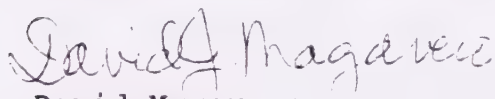
Vicki Lee
Chair
Mother Lode Chapter
Sierra Club



Beatrice Cooley
Director
American River Coalition



Steve Evans
Sacramento River
Preservation Trust



David Mogavero
President
Environmental Council of Sacramento

LETTER 6

Response to Comment 6-1

The comments are noted. This comment primarily addresses the adequacy of the proposed policy and is more appropriately responded to by the City Council and Board of Supervisors.

The commentor suggests that the DEIR did not adequately evaluate a range of alternatives and the commentor suggests what they believe to be a superior alternative policy. The alternative policy suggested by the commentor involves moratorium on development in Natomas and the Pocket until levee stabilization work is completed.

The Draft EIR, in fact, evaluates a reasonable range of alternatives and provides the reader with information to allow evaluation of any number of permutations of implementation of the City and/or County Flood Plain Management Regulations (which can represent de facto moratoria) in various subareas of the flood plain. In addition, Mitigation Measure 18 was identified in the DEIR and proposed to mitigate loss of life impacts in areas subject to unwarned catastrophic failure of the Sacramento River levees. This measure would prohibit development in areas subject to flooding inundation times of less than two hours. For the purposes of this study, these areas include all or parts of the Pocket and Natomas. This mitigation measure is effectively the same as the alternative suggested by the commentor.

Table 16, Impacts of the Alternatives, was developed to both describe the alternatives specifically evaluated in the EIR, as well as providing information to allow the reader to understand the property damage and loss-of-life effects of other potential policy solutions. As such, incremental information is provided for each described alternative by each flooding subarea (Natomas, Pocket, and the Rest of Flood Plain) for the following factors: population, housing units, non-residential development, property damage, and loss-of-life. The alternatives include moratoria in differing areas and, thus, information is included which allows the reader to "test" additional alternative policies as they relate to those factors. In addition to the alternatives discussion, the EIR acknowledges the role that a moratorium would play in fully mitigating project impacts in Chapter 6.3 of the DEIR, page 125, where it states that, "The only mitigation measure would be to adopt a land use policy which prohibits additional development until 100-year flood protection is achieved."

Response to Comment 6-2

Placing a moratorium on FEMA's new flood plain maps and endorsing new floodplain development can be seen as reverse sides of the same policy. Since the purpose of the moratorium, is to permit new flood plain development to occur, imposition of the moratorium constitutes an endorsement of such development. Subsections 1085(c)(1)(F)

and (G) [see subsections (a)(6) and (a)(7) of Appendix L] make it clear that this endorsement is not unqualified. Subsection 1085(c)(91)(F) states that:

"The Federal purposes embodied in the National Flood Insurance program. . .remain valid for the Sacramento Metropolitan area and impose upon its local governmental jurisdictions an obligation to exercise their authorities to avoid undue exposure to the dangers of floods and to voluntarily comply to the maximum extent practicable, consistent with other purposes of this section, with the National Flood Insurance program standards which are anticipated to be applicable to the Sacramento area following expiration of the period set by [this legislation]."

The "other purposes of this section" are set forth in subsections 1085(c)(1)(D) and (E) [see (a)(4) and (a)(5) of Appendix L]. These purposes are to avoid "the break up of the political, institutional, and economic relationships sustaining the high level, comprehensive flood protection efforts" in Sacramento and thereby to avoid the imposition on the Federal Government of "various, substantial costs related to emergency responses and damage claims in the event of a major flood."

Subsections 1085(c)(1)(D), (E) and (F) thus identify the Federal interests underlying the special legislation. These interests are both long-term and short-term. The long-term interest is to expedite the efforts necessary to achieve comprehensive flood protection for the Sacramento area so as to avoid the substantial Federal outlays that could result from a major flood in the area prior to the achievement of such protection. It is assumed in this regard that imposition of FEMA's flood plain maps would make it impossible for the City and County to proceed with new development in the flood plain and would, therefore, undermine the City and County's ability to sustain their participation in the flood protection effort. This would conflict with the long-term Federal interest. The short-term Federal interest is to limit the government's exposure under the National Flood Insurance Program (NFIP) to the risk of flood-related property damage during the period prior to the achievement of comprehensive flood protection. Hence, the City and County, in exercising their authority to proceed with new flood plain development, are expected to avoid "undue exposure" to the risk of flooding and to "comply to the maximum extent practicable" with NFIP regulations.

Subsection 1085(c)(1)(G) contains a more specific expectation regarding the City and County's conduct during the period of the Special Legislation. This subsection states that the City and County will not permit any increases in urbanization "beyond lands so designated in their General Plans." It further indicates four additional points which the City and County will be expected to consider when exercising their discretion to approve new flood plain development. These points include:

- Establishing an evaluation -- emergency response plan;
- Creating mechanisms by which to attempt to provide notice to all buyers of new structures;

- Retaining natural floodways; and
- Recommending to all buyers of new structures to purchase flood insurance.

Finally, subsection 1085(c)(1)(H) states that the City and County "reserve the authority to impose elevation or other requirements for new construction based upon best available flood data if facts indicate the necessity of doing so." This subsection is directed at landowners, developers, and other interested parties who might otherwise be deemed beneficiaries of the Congressional endorsement of new development. It indicates that where the City and County consider it necessary for reasons of public safety or otherwise to impose elevation or other flood-related requirements in connection with any new development in the flood plain, then these jurisdictions shall have the authority to do so. Thus, the Special Legislation does not create any private right or entitlement to develop.

In summary, subsection 1085(c)(1)(F) sets forth the general expectation that the City and County will adopt a land use policy which strikes a reasonable balance between responding to the risk of flooding and continuing the orderly development of the community; subsection 1085(c)(1)(G) contains a more specific expectation regarding the urbanization of agricultural lands; and subsection 1085(c)(1)(H) makes it clear that the Special Legislation creates no entitlement to develop in the floodplain. The DEIR identifies the interrelationship between the moratorium on FEMA's new flood plain maps and the endorsement of new flood plain development. In this regard, it is not clear that the DEIR has changed the focus of the Special Legislation, though it may be argued that the DEIR does not sufficiently stress the qualified nature of the endorsement. To the extent that Comment 6-2 raises this point, the comment is accepted and the following language is added on Page 9 of the Draft EIR at the end of the third full paragraph:

The Special Legislation further requires the City and County to comply to the extent practicable with the standards of the NFIP which are anticipated to be in effect at the end of the Special Legislation period. It also requires that neither jurisdiction add new lands to the designated urban areas in their respective general plans and, finally, acknowledges that the City and County have the authority to impose elevation requirements based on new flood data if the facts indicate the necessity of doing so. The full text of the Special Legislation are included in Appendix L.

The following is added at the end of the DEIR as a new Appendix L:

"APPENDIX L

"THE SPECIAL LEGISLATION

"(Portions of the McKinney Homeless Assistance Act,
excerpted from the Federal Register)

"(a) FINDINGS. The Congress finds that:

"(1) the Sacramento, California area has had in place a flood control system which has been classified as protecting against floods with recurrence intervals of up to 125 years;

"(2) local governmental entities in the Sacramento metropolitan area have been working diligently with the State of California, the Army Corps of Engineers, and the Bureau of Reclamation since the occurrence of a heavy storm in 1986 to formulate and implement a comprehensive plan to provide high level, efficient flood protection to the region;

"(3) the Federal Emergency Management Agency, in response to studies by the Corps of Engineers indicating increased flood vulnerability attributable to increased estimates of the frequency of large storms in the region, has begun a process of reanalyzing the flood risks in the Sacramento area, and this analysis is likely to result in substantially increased flood elevation requirements under the National Flood Insurance Program;

"(4) changed flood elevation requirements attributable to a change in flood elevation determinations by the Director of the Federal Emergency Management Agency will cause severe disruption in the Sacramento region and could precipitate the breakup of the political, institutional, and economic relationships sustaining the high level, comprehensive flood protection efforts;

"(5) failure to implement a comprehensive plan would leave substantial portions of the Sacramento area without necessary flood protection, and further, could impose on the Federal Government various, substantial costs related to emergency responses and damage claims in the event of a major flood;

"(6) the Federal purposes embodied in the National Flood Insurance Program to minimize development in flood plains, to minimize damages caused by floods, and to reduce requirements for costly flood protection projects remain valid for the Sacramento metropolitan area, and impose upon its local governmental jurisdictions an obligation to exercise their authorities to avoid undue exposure to the dangers of floods and to voluntarily comply to the maximum extent practicable, consistent with other purposes of this section, with the National Flood Insurance Program standards which are anticipated to be applicable to the Sacramento area following expiration of the period set by subsection (b);

"(7) the City and County of Sacramento have each provided assurances to the Congress that they will not designate any increases in urbanization beyond lands already so designated in their general plans during the period set forth in subsection (b), and, in addition, that in the exercise of their discretion to approve new development they will give careful consideration to:

"a. an evacuation-emergency response plan;

- "b. mechanisms by which to attempt to provide notice to all buyers of new structures;
- "c. retention of natural floodways; and
- "d. recommendations to all buyers of new structures to purchase flood insurance.

"(8) the City and County of Sacramento, in their discretion reserve the authority to impose elevation or other requirements for new construction based upon best available flood data if facts indicate the necessity of doing so; and

"(9) maintenance of the Federal flood elevation requirements now in effect for the Sacramento area for the limited period set forth in subsection (b) will facilitate implementation of the high level, comprehensive plan for flood protection in the Sacramento area, and is therefore in the interest of Sacramento, the public safety, and the United States.

"(b) FLOOD ELEVATIONS. Prior to the expiration of two years after the date on which the Secretary submits to the Congress the report on the feasibility study on Northern California Streams, American River Watershed, but not later than four years after the date of enactment of this act, the provisions of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 shall apply on the basis of flood map elevation determinations made by the Director of the Federal Emergency Management Agency in effect as of the date of enactment of this Act to the following areas:

"(1) the flood plain areas within Sutter and Sacramento Counties, California (collectively known as the "Natomas area") which are bounded by the Sacramento River, the American River, the Natomas Cross Canal, and the flood plain of the Natomas East Main Drainage Canal;

"(2) the flood plains with Sacramento County of Dry Creek, Arcade Creek, and Morrison Creek, to the extent these creeks are affected by the American and Sacramento Rivers, the American River, and the Sacramento River upstream of the City of Freeport, California; and

"(3) the City of West Sacramento in Yolo County, California.

"(c) BUDGET SUBMISSION. The President, in submitting his budget for fiscal year 1990, shall include a schedule for completing the study referred to in subsection (b) as expeditiously as practicable and an estimate of the resources required to meet such schedule."

Response to Comment 6-3

With respect to the responsiveness of the Policy to the expectations set forth in the Special Legislation, the commentor is directed to the Addendum to this FEIR submitted by the Office of the City Attorney. This Addendum argues that the City's General Plan policy on flooding contemplates that new development may occur in areas of the 100-year flood plain and anticipates that in permitting such development the City will strike a reasonable balance between responding to the risk of flooding and continuing the orderly development of the community. The Addendum further argues that the City could reduce the risk of flooding associated with the Proposed Land Use Policy by broadening the

restrictions imposed on residential and non-residential development and by leaving these restrictions in place until the levees in the Natomas area are stabilized. The Addendum concludes that the proposed policy, as modified, would be consistent with the General Plan.

The General Plan policy on flooding, as interpreted in the Addendum, shares with subsection 1085(c)(1)(F) the expectation that the City will adopt a land use policy which both responds to the risk of flooding and allows for the continued orderly development of the community. Accordingly, to the extent that the Addendum judges the modified policy to be consistent with the General Plan, this modified policy maybe deemed to be responsive to subsection 1085(c)(1)(F) as well.

With respect to subsection 1085(c)(1)(G) the Proposed Land Use Policy states that there shall be no designation of new urban lands and no overall increase in urbanization in the areas of the 100-year flood plain lying within the City's jurisdiction. As for lands located in the County, the Proposed Policy allows that there will be no new urbanization beyond that identified on the new General Plan currently under preparation. As noted in the County's correspondence dated January 24, 1990 (attached to Letter 4), this new General Plan may, in fact, convert some agricultural lands to urban designations. However, where such redesignations occur, it is the County's intention to withhold any subsequent rezoning of these lands until October 31, 1992 when the Special Legislation expired. While it may be argued that this approach is technically inconsistent with the express language of subsection 1085(c)(1)(G), this policy may be considered to comply with the spirit and intent of this subsection.

As for the additional points raised in subsection 1085(c)(1)(G), the City has required notification of all new buyers in the flood plain and has taken steps to recommend purchase of flood insurance (such steps are also being taken by local lending institutions). Furthermore, the City has an emergency response-evacuation plan which is tied to flood stages. The City is also undertaking special studies of flood-prone areas. These time-inundation studies provide City emergency services with better information about available evacuation routes and areas which might need special evacuation attention due to rapid flooding characteristics.

Finally, with respect to subsection 1085(c)(1)(H), the Proposed Land Use Policy reserves the City's authority to require development pursuant to development agreements to meet NFIP regulations on a case-by-case basis. Although there are no formal requirements included in the Policy, development agreements are not explicitly excluded from such requirements. Furthermore, there is nothing in the Proposed Land Use Policy which would preclude the City from taking further action if information in the future suggests that the flood risk is different than is suggested by current information.

The responsiveness of the proposed Land Use Policy to the Special Legislation is an issue of importance as it relates to potential action of the City Council and Board of Supervisors in the proposed adoption of the Policy as an ordinance. In its staff report, City staff will present information to the City Council as to the intent and objectives of the proposed ordinance, its responsiveness to any other legislative or regulatory actions, and an assessment of the proposed Land Use Policy's potential effects on the community. The results of the EIR process is only part of this overall assessment that will be presented to the City Council as part of its deliberations on the proposed ordinance.

The spirit and intent of the Special Legislation has been evaluated by the Sacramento Metropolitan Flood Protection Task Force (now the Board of Directors of the Sacramento Flood Control Agency). This body determined the Proposed Policy in the Draft EIR met the spirit and intent of the Special Legislation. Comments made in the DEIR assist the decision makers in arriving at a final policy that will meet all necessary objective.

Response to Comment 6-4

The objectives of the City and County in proposing the Land Use Policy, which are outlined on page 25 of the EIR, are intended to meet the requirements of Section 15124(b) of the CEQA Guidelines which require the EIR to include a "statement of the objectives sought by the proposed project." The objectives were derived through discussions with representatives of the Sacramento Metropolitan Flood Protection Agency, which originally proposed the language of the policy.

The primary effect of the Special Legislation is to give the City and County the authority to develop appropriate land use criteria for development in the flood plain area. This has been confirmed by FEMA in correspondence with Congressmen Fazio and Matsui (see letter attached). (Please see also Responses to Comments 6-2 and 6-3.)

Response to Comment 6-5

An analysis of flood impacts that could occur with existing and post levee stabilization levels of protection (40-year existing level of protection for Natomas; 50-year post levee stabilization level of protection for Natomas (this has subsequently been changed to 60-year protection by the USCOE); and the 63-year current and post-stabilization level of protection for the remainder of the flood plain) was not included in the Draft EIR because the information is not readily available. To the extent that it is possible, there is a discussion of lesser flood events on page 97 of the DEIR. Information to substantiate this decision is not readily available because such studies are undertaken by the USCOE only for the 100-year flood plain for FEMA purposes and the 200-year flood plain for economic evaluative purposes.

Response to Comment 6-6

Response to Comment noted. A mistake was made in Tables 11 and 13 which resulted in a column for year 1997 to be left in the Tables, which otherwise only address change over time. The tables have been revised to avoid any further confusion. The information presented in the tables has not changed. Appendices D, E and F provide background information to support the analyses and clearly explain the analytical assumptions included in the EIR. Appendix D is being supplemented in this Final EIR (please see also Response to Comment 4-3).



JAN 3 1989

The Honorable Vic Fazio
The Honorable Robert T. Matsui
House of Representatives
Washington, D.C. 20515

Dear Congressmen Fazio and Matsui:

This is in response to your letter of November 30, 1988, requesting the establishment of a mutual understanding of how the Federal Emergency Management Agency (FEMA) is interpreting the statutory provisions of P.L. 100-628 pertaining to flood elevations for Sacramento, California and vicinity. In particular, you expressed concern that FEMA may not maintain the status quo with regard to flood insurance premiums to be charged in areas newly identified by the U.S. Army Corps of Engineers as being within a 100-year flood plain. You stated your position that the net effect of the statutory language is to mandate that flood insurance continue to be available at the status quo rates.

P.L. 100-628 states in part that "...the provisions of the National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 shall apply on the basis of flood map elevation determinations made by the Director of the Federal Emergency Management Agency in effect as of the date of enactment of this Act..." The process of flood elevation determination for land use management and insurance rating purposes is specified in Section 1363 of the National Flood Insurance Act of 1968, as amended. This process has been invoked within areas identified as Zones A1-A30, AE, AO, and AH on the effective Flood Insurance Rate Maps (FIRM) for the metropolitan areas of Sacramento. The base (100-year) flood elevation determinations established through this process are published on the FIRM and form the basis for actuarial rating of flood insurance and for the local floodplain management requirements which communities must enforce as a condition for participating in the National Flood Insurance Program (NFIP). FEMA's interpretation of P.L. 100-628 is that the Agency is estopped from altering the established base flood elevations within these zones, or from the determination of new elevations outside of these zones.

Although the statute does not directly address the issue of insurance rates, the estoppel on the establishment of new base flood elevations effectively prohibits FEMA from charging actuarial (risk-based) rates within the areas specified. Since risk data is available from the Corps of Engineers' study, but Congress has prohibited the establishment or alteration of base flood elevations based upon it, the assignment of insurance rates becomes somewhat arbitrary. In light of this situation, FEMA will act in accordance with your position that the statute prohibits changes to insurance rates within these areas, and continue to make flood insurance available at rates normally utilized outside areas of special flood hazard.

I am sure you recognize that maintaining the status quo with regard to insurance rates in these areas will create a significant subsidy for new construction, as actuarial rates are likely to be considerably higher than the current rates. This subsidy will be further increased because FEMA will be unable to enforce the program requirement that new construction be elevated to base flood levels. This subsidy could exist well beyond the maximum 4-year moratorium period specified in the statute, if the anticipated structural flood control solutions are not realized in the near future. In this situation, other flood insurance policy holders and taxpayers in California and the remainder of the country would be paying for the expected flood losses to new construction which will be built in these areas during the next four years.

At the present time, FEMA plans to designate the areas specified in P.L. 100-628 as Zone A99. This zone is defined as an area of special flood hazard where enough progress has been made on a protective system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes. This zone designation is normally reserved for those flood-prone areas which meet the "adequate progress" guidelines specified in Section 1307(e) of the National Flood Insurance Act of 1968, as amended. However, its use will allow administration of the NFIP in the Sacramento area in accordance with the expressed desires of the Congress.

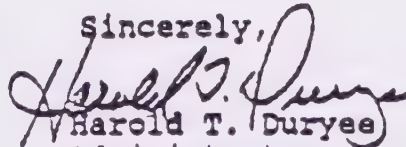
Although the local floodplain management requirements for Zone A99 are minimal under 44 CFR Part 60.3(c)(9), the Sacramento area jurisdictions must recognize that this will be a special use of this zone and that these requirements were designed only for those situations where 100-year flood protection was assured in the near future. Since this is not the case in the Sacramento area, local jurisdictions should be judicious in their establishment and application of appropriate floodplain management criteria, based upon their knowledge of the risk involved. In accordance with P.L. 100-628, FEMA will abide by the decree of the local jurisdictions in their regulation of new construction in these areas and expect them to live up to their representations to the Congress as listed in the statute.

Rates charged in Zone A99 are identical to the rates currently in effect for these areas. The use of this zone designation will put into place the flood insurance purchase requirement and the requirement for lender notification to purchasers of the flood-prone status of these properties, as specified under the program statutes. We believe this is consistent with the intent of Congress as defined in the September 30, 1988 colloquy between Congressmen Fazio and Petri on an identical provision which was incorporated in H.R. 5247.

Our current schedule calls for the production of the preliminary FIRMS for the affected communities (except the City of West Sacramento) by May 1, 1989. At that time, a final meeting will be held with the communities to explain the insurance rating and floodplain management requirements for these areas. Following this meeting, the communities will be provided with a review period and the maps will become effective around November 1989. Since the risk study for West Sacramento will not be completed by the Corps of Engineers until May 1989, a final meeting will probably not be held for that jurisdiction until August 1989 and the map will not become effective until around February 1990.

Should you have any further questions on this matter, please have a member of your staff contact our Office of Congressional Relations at 646-4500.

Sincerely,



Harold T. Duryee
Administrator

Federal Insurance Administration

Table 11 on page 102 is revised to read as follows:

TABLE 11
DAMAGE TO PROPERTY DUE TO 100-YEAR FLOOD
STRUCTURES AND CONTENTS
In Millions of (1989) Dollars

	1989 to 1992 Existing Level of Flood Protection Prior to Stabilization	1992 to 1997 with Stabilization	1997 to 2010 Annual Increment ¹
<u>Natomas</u>			
Residential	\$337	\$210	\$401
Non-Residential			
Retail	14	8	24
Non-Retail	150	86	265
Total Non-Residential	<u>164</u>	<u>94</u>	<u>289</u>
Total Damage	\$501	\$304	\$690
<u>Remaining Flood Plain Area²</u>			
Residential	\$1,531	\$879	\$370
Non-Residential			
Retail	219	307	35
Non-Retail	1,394	550	118
Total Non-Residential	<u>1,613</u>	<u>1,938</u>	<u>153</u>
Total Damage	3,144	2,817	523

¹ Annual increment is the additional dollar amount of property damage for each year after 1997 that additional upstream storage and levee improvement projects are not implemented.

² Including the Pocket Area.

SOURCE: EIP Associates.

Please refer to Table entitled "Damage to Property Due to 100-Year Flood, Structures and Contents," in Appendix E, for complete compilation of property damage values under the three flooding scenarios.

Table 13 on page 110 is revised to read as follows:

TABLE 13
NUMBER OF POTENTIAL FATALITIES IN THE 100-YEAR FLOOD PLAIN UNDER
THE THREE FLOOD SCENARIOS

	1989 to 1992 Existing Level of Flood Protection Prior to Stabilization	1992 to 1997 Flood Protection With Stabilization	1997 to 2010 Annual Increment ¹
Natomas	17	.37	.51
The Pocket Area	10	.12	.0003
Remaining flood Plain Area	<u>2</u>	<u>2</u>	<u>.47</u>
TOTAL	29	2.5	1

¹ The annual increment is the additional number of fatalities for each year after 1997 that additional upstream storage and levee improvement projects are not implemented.

SOURCE: USCOE and EIP Associates.

Please refer to the table entitled "Number of Potential Fatalities in the 100-Year Flood Plain Under the Three Flood Scenarios," in Appendix F, for a complete compilation of potential loss of life numbers under the three flooding scenarios.

Response to Comment 6-7

Table 16, "Impacts of the Alternatives," Chapter 7 of the DEIR, provides the reader information to evaluate a broad combination of policy alternatives (see also Response to Comment 6-1). The commentor has suggested an alternative involving a short-term moratorium in Natomas and the Pocket until after levee stabilization (assumed to be 1992). This suggestion was encompassed in Mitigation Measure 18. Implementation of such a measure would avoid the risk of loss of 17 lives in Natomas and 10 lives in the Pocket. This is derived from Table 16, page 131 of the Draft EIR, which shows no risk to loss of life in Natomas or the Pocket between 1989 and 1992 under Alternatives 2 and

3. Similarly, it would avoid the risk of property damage of about \$500 million in Natomas and \$253 million in the Pocket.

After levee stabilization, development and the associated risk would continue in both Natomas and the Pocket, similar to that described for the post-1992 period for the proposed project. It is possible that a forced delay of development in Natomas and the Pocket could cause more rapid development in the post-1992 period than analyzed in the DEIR. However, the degree to which that effect would occur cannot be accurately predicted.

The EIR is based on the best information available at the time of the writing of the Draft and Final EIRs. In the future, as new information becomes available, the assessment of risk will be refined. This EIR includes a worst-case assessment of potential risk from flood. It is anticipated that any new information which would become available in the future may cause the apparent risk to decrease. It is not anticipated that this EIR would be recirculated under those circumstances as CEQA only requires recirculation in the event that new information related to new undisclosed impacts is identified.

Response to Comment 6-8

When the government evaluates the acceptable risk associated with a given hazard, specific characteristics are taken into account. For this Draft EIR, the risk assessment evaluated the impacts associated with the proposed Land Use Policy within the 100-year flood plain. FEMA defines the 100-year flood plain as the area inundated by a 100-year flood which by definition has a one percent chance of occurring in any given year. Providing 100-year flood protection is FEMA's standard for acceptable risk associated with flooding.

The Draft EIR states that "a significant impact would occur if, as a result of the project, any deaths and/or property damage occurred during a 100-year or lesser flood as a result of any new development allowed by the Proposed Land Use Policy." This standard of significance is very rigorous.

Proposition 65 establishes a standard of significance for exposure to hazardous materials, a very different type of hazard than a flood hazard. It is, therefore, logical that the standard of significance could be equally dissimilar. In fact, "no significant risk" could be a much more lenient standard than that used in the EIR. This is because Section 12703 of Proposition 65 states that the threshold for "no significant risk" is one excess case of cancer in an exposed population of 100,000 assuming a lifetime exposure. This EIR uses an absolute number of one death as significant, regardless of total exposed population and regardless of length of time of exposure.

Response to Comment 6-9

Page 101, the second paragraph is revised to read as follows:

Depth of flooding was generalized for each of the subareas described above. Based on the depth, the potential degree of damage to property (building and contents) was assessed based on standard depth-damage relationship information provided by the USCOE. Those depth-damage relationships are described and graphed in Appendix E of the EIR. Property damage was aggregated by subarea for the larger geographic areas of Natomas and the Remaining Flood Plain Area.

Effects of flooding on property damage was calculated for Natomas and the remainder of the flood plain (including Pocket). This differentiation was based on the fact that flooding is more likely to occur in Natomas than the rest of the flood plain. Effects of flooding on property would be more likely in Natomas, as the level of flood protection in that area is currently 40-year protection. The remainder of the flood plain (including Pocket) has 63-year protection. For this reason, impacts in the Natomas area are discussed separately from those of the remainder of the flood plain.

Response to Comment 6-10

The loss-of-life analysis included in the EIR assumes a worst-case levee break scenario taking place during the early hours of the morning. In those areas of the flood plain subject to unwarned levee failure (Natomas and Pocket) it was assumed that the primary population at risk was the residential population. There would, in fact, be some relatively small number of employees who work all night and, thus, could be present during the assumed time of the flood. The loss-of-life rates presented in the EIR assumed that warning time is limited and evacuation warning is difficult because people are sleeping. People working during night hours would be much more likely to be warned and it is likely that their appropriate loss-of-life rate would be approximately 1-in-10,000. Since these people are accounted for in the residential estimates elsewhere in the City or County, it is not likely that any measurable difference in loss-of-life would take place under the EIR worst-case analysis by including an estimate of population in non-residential buildings.

An alternative analysis would be to evaluate, as suggested by the commentor, the potential effects of a mid-day flood with the primary exposure being to workers and non-working residents. Such an analysis would be based on an assessment of total daytime population, both employment-related and residential. Daytime employee evacuation is considered to be more effective than late-night residential evacuation. However, no factors exist to suggest the effectiveness of daytime evacuation procedures which are complicated by the fact that families are separated. It is clear that loss of life ratios would be less than the 1-in-220 estimates for worst-case evacuation but more than the 1-in-10,000 which is assumed for fully effective evacuation. However, there is no information to substantiate what in this range would be an appropriate estimate.

Response to Comment 6-11

The type or amount of hazardous material that would potentially be associated with new development in the flood plain is not known because such detailed information about future non-residential development is speculative. Further, potential effects of the flood on releasable hazards would be entirely dependent on the particular structural design of the affected storage and transport facilities, the type of hazard in question, the local hydrology in the area, and other site/project specific issues. Thus, it is not an appropriate nor possible level of analysis for this Program EIR. It should be noted that individual environmental analyses will be required for all individual developments. As part of those environmental analyses, potential for hazardous releases will be evaluated and mitigated if necessary.

It should also be noted that the Sacramento County Hazardous Waste Management Plan (CHWMP) provides criteria which place limitations on the siting of hazardous waste facilities (disposal, treatment, storage and transfer station facilities). In summary, hazardous waste disposal facilities are prohibited from being located in the 100-year flood plain, while facilities for the treatment, storage or transfer of hazardous materials may only be located in the flood plain where engineering solutions are incorporated to avoid exposure to flood waters. Such engineering solutions may include, but are not limited to, berms, raising structures above the base flood elevation, etc.

The CHWMP applies to the siting of hazardous materials handling facilities and the City and County must comply with the CHWMP regulations and policies. For other new development, not specifically intended for the handling of hazardous materials, extensive Federal, State, and local regulations exist for the control of the handling, storage, disposal, and transport of hazardous materials. Examples of such uses include gasoline stations, dry cleaners, etc. Compliance with such specific regulations will be evaluated through the project-specific CEQA process that will be undertaken for individual projects.

There are no specific regulations restricting the placement of underground storage tanks (UST) in the flood plain. However, structural design requirements for all USTs are in place to ensure that the tanks do not leak under any circumstances, including inundation.

Response to Comment 6-12

The impact and mitigation described and referred to by the commentor relates to inconsistency with the City of Sacramento General Plan and the County of Sacramento General Plan. These types of impacts, policy level impacts, are semantic in nature in that they are potential inconsistencies with "stated" policies of the local jurisdiction. Section 15126(c) of the CEQA Guidelines states that the EIR should "Describe measures which could minimize significant adverse impacts . . ." To the extent that the inconsistency acknowledged in the EIR is one between an existing stated policy and a proposed policy,

it is appropriate that mitigation measures would involve adjustment of the wording of one of the policies. The Addendum to the EIR, included in this document, includes information presented by the City Attorney's Office which suggests that the City Council may find that no significant impact would occur in relation to the General Plan since there is no inconsistency between the General Plan and the policy approach suggested in the Addendum. This is a final determination which will be made by the City Council.

Response to Comment 6-13

Response to Comment 6-2, page 61 of this document, provides an expanded discussion of the City's interpretation of the "spirit and intent of the Special Legislation." In essence, the City believes that the Special Legislation was intended to permit the City and County to adopt a policy which reflects a balance between continuing growth to sustain the economic, social, and political vitality of the region and restricting development to reduce the increased risk associated with a potential flood event. Response to Comment 6-3 provides an expansion of the EIR discussion of the relationship between the Proposed Land Use Policy and the language of the Special Legislation.

To the extent that the intent of the Special Legislation was to permit the City and County to strike a balance between continued development and limited risk, the alternatives in the EIR which identify moratoria in large parts of the City do, in fact, conflict with the objective of complying with the spirit and intent of the Special Legislation.

Response to Comment 6-14

The Draft EIR includes a range of alternatives to the proposed project which provide the decision makers a reasonable range of alternatives for the purposes of comparison. That is clearly not to say that there are not any other permutations for the Policy. The EIR, by breaking down the flood plain both geographically and chronologically allows the reader the information to quickly and easily evaluate impacts of continued development in different portions of the flood plain. This further allows the reader the ability to "test" various permutations of growth in different parts of the flood plain, thus, and effectively test alternative policies. Close evaluation of the tables provided for the impact analysis suggest that deference of development in Natomas and Pocket would avoid the potential for loss of up to 27 lives out of the total of 29 projected for the 1989-1992 period. It could be anticipated that the development deferred would take place after 1992 and thus residents would be exposed to a continued risk, but a substantially lower loss-of-life rate.

Please see also Responses to Comments 6-1 and 6-7.

Response to Comment 6-15

As was stated above, the EIR presents a range of policy alternatives. These alternatives all suggest various combinations of imposition of local flood plain management regulations and provide detailed information to allow the reader to evaluate alternative policies and geographic combinations. By definition, these types of alternatives would redirect development to other, safer, areas. The greater the stringency of the flood plain management regulations, the greater the potential for redirection of development. Due to the nature of the private market, it would be difficult, and speculative at best, to attempt to project the location of such redirected development as it could locate elsewhere in the region, or outside the region entirely.

To the extent that development in "safer areas" would be outside the flood plain, such development would not be available to support the new flood protection improvements. Only development located in the "area of benefit" would be subject to proportionately sharing the economic burden of flood control solutions. In this case, the "area of benefit" would only be the 100-year flood plain.

Long-term redirection of development away from the central portion of the Sacramento metropolitan region would completely undermine the planned progression of urban development in the region. The flood plain areas of Sacramento lie in the center of a large metropolitan area and surround the Capitol of the State of California. A moratorium on development in these areas would be inconsistent with the enormous investment from both public and private sectors to the development of infrastructure compatible with urban uses and would be counter to historic patterns of urban development in the region and the State.

Additionally, there would be separate, identifiable environmental impacts of such a dispersed development alternative. The General Plan EIR documents that vehicle trips originated outside of the City are at least twice as long as those originated within the City. A policy alternative, which directed development to upland, outlying areas, would proportionately cause increases in traffic congestion and air pollutant emissions. Such dispersed development would also be contrary to a wide range of City policies, embodied in the General Plan and the North Natomas Community Plan, which require the City to develop residential and non-residential development in a balanced fashion in order to minimize air quality, traffic, and housing impacts of new non-residential development.

Response to Comment 6-16

The comments are noted. Economic analysis undertaken by the consultant suggests that development in Natomas and the Pocket is not directly necessary to finance the flood control improvements needed for the area. The evaluation does suggest that there will be substantial economic impacts on specific landowners and developers in the affected areas in the event of a building moratorium in the Pocket and Natomas.

A wider moratorium on development, one focused on the entire flood plain area could have substantial economic impacts in the region. A citywide moratorium on commercial land use would have dramatic negative economic impacts upon the City with over 16,000 jobs being lost and nearly \$375 million in wages and salary lost. Residential moratoria would have less significant effects since it is assumed that such development would take place elsewhere in the region.

The exact definition of the level of economic, social and institutional disruption that would need to occur in order to interfere with the future flood protection effort is unclear. It appears from information currently available to the City that short-term focused moratoria should not substantially interfere with flood protection. While larger-scale, longer-term moratoria, which were a likelihood prior to passage of the Special Legislation, could prove to be economically damaging to the City and regional economy, it does not appear that such moratoria would prove to be an obstacle to expeditious and efficient implementation of a comprehensive flood protection effort.

COPY

BEFORE THE CITY OF SACRAMENTO PLANNING COMMISSION
1231 I Street, First Floor
Sacramento, California

~~ORIGINAL~~

REPORTER'S TRANSCRIPT

October 26, 1989

ITEM NO. 32

DRAFT ENVIRONMENTAL IMPACT REPORT FOR THE LAND USE
PLANNING POLICY WITHIN THE 100-YEAR FLOOD PLAIN IN THE
CITY AND COUNTY OF SACRAMENTO (M89-054) SCH NUMBER 89071707

Reported by:

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Legal Affairs Director of
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League

SACRAMENTO, CALIFORNIA

6:50 P.M.

--o0o--

CHAIRPERSON OTTO: We are now to Item No. 32.

MS. WENDT: For Item No. 32, we are here tonight to receive public comments on the Draft Environmental Impact Report on the Land Use Planning Policy within the 100-year Flood Plain in the City and County of Sacramento. No action will be taken tonight.

Before the commission opens the meeting for comments, however, we would like to review three topic areas related to the EIR.

First I would like to review some of the background on the key events and actions that have led to the development of a proposed land use policy and a subsequent Draft EIR on that policy, then I would like to outline the remaining steps required under the California Environmental Quality Act and clarify the purpose of the format of today's meeting. And then Brian Boxer of EIP Associates that prepared the Draft Environmental Impact Report will highlight the major issues of impacts that were identified in the Draft EIR.

You all did receive copies. We do have a few extras, if anybody needs one.

In November of 1988, the U.S. Army Corps of

1 Engineers and FEMA provided the city and county with a
2 draft updated set of flood maps of the Sacramento Area.
3 The maps showed the majority of the city within the
4 100-year flood plain. In response to this, Congress gave
5 the city and the county four years to make adequate
6 progress towards improving the level of flood protection
7 prior to designating the new maps as official.

8 A comprehensive, multi-agency effort resulted in
9 plans for a future flood protection program that would
10 require some combination of three major elements in order
11 to achieve a 100-year flood protection throughout the city
12 and the county. The three are: Levee stabilization,
13 additional upstream storage, and levee improvements, which
14 generally means raising the levees.

15 These efforts will require separate environmental
16 review procedures by the appropriate agencies. Some of
17 those are actually in progress now, and environmental
18 review has -- is being carried on for those.

19 The Legislation that authorized the four-year
20 extension also requires the city and county to develop an
21 appropriate land use policy to regulate some new
22 development within the 100-year flood plain. At that time,
23 the Sacramento Metropolitan Task Force was established to
24 respond to the requirements of that legislation. A major
25 goal of the task force was to develop a city/county policy

1 on growth within the 100-year flood plain.

2 After many hours of discussion and minor revisions,
3 on April 27th of this year, the task force recommended
4 approval of a draft policy, and the language of that policy
5 is what we are going forward with now and is what is
6 included within the Draft EIR that you have a copy of.

7 The policy contains three major components. It
8 provides interim growth guidelines for some flood-prone
9 areas within the city and county; it defines building
10 standards for nonresidential structures within flood-prone
11 areas, and it requires property owners to sign a liability
12 waiver form prior to construction.

13 A little more specifically, it states that newly
14 identified flood-prone areas associated with the Sacramento
15 River portion of the flood plain pose the greatest threat,
16 and the flood policy building restrictions apply only to
17 these areas.

18 There are maps within the Draft EIR that
19 differentiate between the Sacramento River portion of the
20 flood plain and the entire flood plain, if there's any
21 question about that.

22 It also says that residential projects that require
23 discretionary entitlements and have been filed after
24 April 1st of this year may proceed through the planning
25 process but will not be granted final building permits

1 until the project can be built to conform with the flood
2 plain standards.

3 It also says that building restriction inside newly
4 identified flood-prone areas will be lifted when contracts
5 for levee stabilization work are awarded. And that's
6 expected to be June of next year, or when the City Council
7 and Board of Supervisors determine that it's reasonable to
8 allow building to proceed.

9 The policy also says that the city will not
10 designate any new flood-prone land for urban uses beyond
11 what is now shown in the General Plan, and it says that all
12 property owners within the newly-identified flood-prone
13 areas who are permitted to proceed with their construction
14 and development must sign a notice and waiver form. The
15 notice and waiver will state that the property owner is
16 aware of the risk of flooding and releases the city from
17 any liability associated with proceeding. The property
18 owner is also required to notify any future owners of the
19 flood threat.

20 On June 7th of this year, the policy was presented
21 to the City Council. The Council separated the legal
22 notice and waiver portion of the policy and requested that
23 an EIR be prepared on the remainder of the policy
24 components.

25 The City of Sacramento was also identified at that

1 time as the lead agency. It was determined that the
2 Environmental Impact Report would take the form of a
3 Program EIR that would provide the environmental analysis
4 necessary to allow the decision makers to approve
5 previously-contemplated growth in the region as special
6 legislation had indicated was appropriate.

7 The Draft EIR was released on September 18th of this
8 year for a 45-day public review period, and we are still in
9 that public review period. The Draft EIR was mailed to
10 over 250 agency representatives and individuals. The
11 Draft EIR addresses the risks to life and property
12 associated with exposing the increment of new development
13 during the time of the policy to the 100-year flood.

14 The Draft EIR doesn't address the notification
15 requirements' portion or future flood protection efforts.
16 There are some steps remaining in the process prior to
17 project approval.

18 On November 1st, that 45-day public review period
19 will end. On December 8th, the Final EIR will be released
20 for a seven-day public review period. The Final EIR will
21 contain copies of all oral and written comments that we
22 have received today and tonight and all the written
23 comments with responses to all of those.

24 On December 19th, it's anticipated that the EIR will
25 be certified by the City Council. After that, the policy

1 can be adopted by the city and the county. It's currently
2 anticipated that on December 19th, the policy will also be
3 adopted by the City Council, and the County will have to
4 adopt it at a date that is not yet known.

5 As I had said, our purpose tonight is to receive
6 comments. We don't expect to immediately resolve issues
7 raised by the public that may be presented here today, but
8 as I said, the oral comments we hear, along with the
9 written comments, will be carefully evaluated and then
10 formal written responses will be prepared in the Final EIR.

11 We are recording the comments tonight so that they
12 can be transcribed so that we can accurately respond to all
13 questions and issues that are raised.

14 And I am here along with Brian Boxer, that I
15 identified, Tim Washburn of City Attorney's Office that's
16 been working on this, and Bill Edgar is also here to answer
17 any questions that the Commission might have. And either I
18 can answer questions on this part of it or Brian can
19 continue and talk about some of the highlights of the EIR,
20 as you wish.

21 CHAIRPERSON OTTO: Is there any question now?

22 MR. NOTESTINE: I think I just have one quick
23 question. And that's where the type of mitigation
24 measures -- and you have the mitigation activity. When
25 it's reduced magnitude, is that generally in areas where

1 developments already occurred and mitigation measures just
2 really deal with new development?

3 MS. WENDT: When you say "mitigation measures," that
4 are identified in the Draft EIR?

5 MR. NOTESTINE: In the summary. You have the
6 mitigation measure here, and then the type of mitigation.

7 MS. WENDT: If it says required, that means --

8 MR. NOTESTINE: Just in the reduced magnitude.

9 MS. WENDT: Those are summarized -- Brian can get
10 into that maybe when he talks about the impacts. But we
11 generally identify them as either -- there's -- I think on
12 the bottom it's a shorthand version to tell you whether
13 it's needed in order to reduce the magnitude below a level
14 of significance or what the criteria is of the measure.

15 We try to make it clear whether this is just
16 something we can do and it will help but it will still be
17 significant, or whether or not by implementing that measure
18 it will reduce it below a level of significance.

19 Is that what you asked?

20 MR. NOTESTINE: Well, I really asked, why doesn't --
21 why can't you reduce it to a lesser?

22 MS. WENDT: Well, I don't know which one it is. But
23 in some instances -- for instance, let's say that we are
24 dealing with a levee break in an area. There probably
25 isn't anything we can do until the levee stabilization is

1 accomplished that would actually reduce the significance of
2 flooding that area; however, by, let's say, reviewing the
3 emergency evacuation plan and making sure that it is -- I
4 am just venting this -- up to date and acknowledges the
5 current status of a particular area, we can certainly
6 minimize what some of the effects could be in a certain
7 situation. But that doesn't mean that even though we did
8 that, we still would be left with an impact.

9 If it's something real simple, that there's a noise
10 problem, we add a noise wall, then we have reduced the
11 impact enough that there's no longer a major issue.

12 But for some things we can't expect to eliminate the
13 significant impact, but we certainly want to try to reduce
14 it all we can, even if we can't eliminate it completely.

15 MR. NOTESTINE: Okay.

16 CHAIRPERSON OTTO: Any other questions? I have one.

17 Your schedule, when did that schedule get laid out?
18 I mean, is that the original schedule?

19 MS. WENDT: It's the original schedule, and we have
20 actually stuck to the original schedule.

21 CHAIRPERSON OTTO: That's what I say, you are on it?

22 MS. WENDT: Yes. I was hoping to get a chance to
23 say that.

24 When we first were dealing with the policy and the
25 timing of some of the key issues associated with getting

1 new maps and having them become final, we were trying to
2 see if there was any way to make this an accelerated
3 process in order to have this completed and ready by the
4 end of December. So everyone involved has gone to great
5 lengths to keep this on schedule and try to keep everything
6 as tight as we could to have this certified and adopted by
7 the end of the year. That was the goal.

8 CHAIRPERSON OTTO: It is certainly commendable on a
9 project like this.

10 MS. WENDT: Then I will turn it over to Brian Boxer,
11 and he will give you a few highlights of what the Draft EIR
12 has identified.

13 MR. BOXER: Thank you, Barbara.

14 Good evening. For the record, my name is
15 Brian Boxer; I am with EIP Associates, and we were the lead
16 consultant working with the city in the preparation of this
17 Draft EIR.

18 The EIR that you have -- the Draft EIR before you
19 this evening, a slightly different type of document than,
20 perhaps, you are used to seeing when other EIRs are
21 prepared on development projects.

22 That's -- what I would like to do is first step
23 through the document with you a little bit, identifying
24 what you are going to find in different sections, and then
25 I am going to hit on some of the particular impacts that we

1 have identified, and then I will be happy to answer any
2 questions that you might have.

3 Barbara has gone through the description of the
4 project. In this case, that is a description of the policy
5 that has been recommended for adoption. You will find in
6 Chapter 4 of this document a separate environmental setting
7 discussion, and in that chapter we have laid out what I
8 think is the groundwork for viewing this policy, the
9 context of flooding and flooding history in Sacramento.

10 You will find in there a hydrology -- discussion of
11 hydrology of the Sacramento and the American River basins,
12 a history of flooding and flood control in Sacramento, a
13 discussion of the responses to flooding concerns, major
14 flood events in the Sacramento, particularly legislative
15 and regulatory responses, and, finally, a discussion of the
16 types of flooding that could occur and the types of hazards
17 typically that you would find associated with such
18 flooding.

19 In the environmental impact section, Chapter 5, you
20 will find discussions of three major topical areas. The
21 first being an evaluation of the impacts relating to plans
22 and policies of the city, of the county, and of state and
23 federal regulations. You will also -- in that chapter you
24 will find an evaluation of the relationship of the policy
25 to land use impacts. And finally, you will find a rather

1 lengthy discussion of the flood hazards, that is the risks
2 to life and property, that would be associated with the
3 policy.

4 In Chapter 6, you will find a discussion of
5 cumulative impacts. Now, in the case of this document, a
6 cumulative impact analysis is really a comparison of the
7 existing risk that is associated with the existing level of
8 development within the flood plain and compared to the
9 incremental risk that would be associated with the policy.

10 And then finally, there are discussions of growth
11 inducement and some of the other required CEQA sections as
12 well as alternatives.

13 So I would like to turn myself to the impacts that
14 we have actually identified in this document. In relation
15 to plans and policies, we have identified two significant
16 impacts; one in relationship to the city General Plan and
17 one in relationship to the county General Plan.

18 In both cases what we have found is that the policy
19 itself would not be consistent with the flood hazard
20 policies included in the city General Plan and, likewise,
21 in the county General Plan. The existing policies address
22 themselves to not allowing increased exposure to flood
23 hazards, and it is our conclusion that this policy would,
24 in fact, do so, unless there would be a conflict between
25 the policy as it is stated today and the General Plan

1 to identify mitigation measures for such an impact, and
2 there's really one of two ways. One could be--either
3 amending the policy to be more restricted and not to allow
4 such exposure or to amend the General Plan to allow for the
5 policy itself.

6 There's a similar set of impacts and mitigations
7 associated with the county General Plan as well.

8 In terms of land use, we have not identified what
9 we -- what we call any significant impacts associated with
10 land use.

11 There are some other impacts that I wanted to
12 highlight for you tonight. The first is that we have
13 concluded that the policy will not measurably decrease the
14 amount of development and growth in terms of population and
15 nonresidential development which is projected to occur
16 during the 1989 to 1997 period without the policy. We
17 don't believe there will be a measurable difference between
18 either of those situations. We have identified that in
19 terms of land use as a not significant impact. But I think
20 it's important to understand it in terms of context when we
21 get into the flood hazards, that area of the EIR.

22 Secondly, we have identified that to the extent that
23 the policy would eliminate the potential for additional
24 annexations or increases in overall urbanization during the
25 next four years, that that could, in fact, be seen as a

1 beneficial impact, in that it would eliminate the
2 possibility for unforeseen conversions of ag land within
3 the city.

4 Now, I would like to go to the flood hazards.
5 That's really the meat of this document.

6 In looking at the flood hazards, we are looking at
7 the potential risk of loss of life and of property damage
8 which could be associated with the 100-year flood, and we
9 have assessed the additional risk that will be -- the city
10 would be exposed to by allowing the growth that could occur
11 under this policy.

12 Now, the risk associated with the policy involves
13 several different factors. We are looking at the amount of
14 population that would be exposed, the type of risk that
15 they are exposed to, and the time frame that they are
16 exposed. As each of those things varies, what we would
17 identify as the risk actually changes.

18 Now, from that we had to identify a series of time
19 frames that we are looking at. And I would like to step
20 through those with you so that you understand the context
21 of the numbers that I will be presenting later.

22 The first time period is from present, 1989, to
23 1982, and that's a time frame during which there will be --
24 what we would call the existing level of flood protection.

25 The Army Corps of Engineers has identified the

1 Natomas area currently has 40-year flood protection, and
2 that the remainder of the city is provided 63-year flood
3 protection. That is the condition that will continue until
4 the levee stabilization project is completed. It's
5 anticipated that that will be completed by 1992.

6 We have then looked at the 1992 to 1997 period.
7 During that time period, it is assumed that Natoma would
8 have a 50-year flood protection, and the rest of the flood
9 plain area, both city and county, would be provided also,
10 again, a 63-year flood protection. And those conditions
11 would have occurred until a combination of additional
12 upstream storage and improvements to the levees are
13 implemented that would provide the entire flood plain with
14 100-year flood protection. For the purposes of our
15 analysis, we have assumed that this could occur by 1997.

16 In the event that such things don't occur by 1997,
17 we have also analyzed -- taken a look, I guess, at the
18 post-1997 period on an incremental basis to provide the
19 decision makers with information that basically is saying
20 for every year that we delay this, there's this extra
21 increment of risk that we are exposing ourselves to. So we
22 have looked at these three time periods from 1989 to '92,
23 from '82 to '97 and then post-1997.

24 Now I would like to run through some, basically,
25 the conclusions of our analysis in terms of potential risk

1 of loss of life and property damage from the policy.

2 Let's start with loss of life. Under the existing
3 level of development -- and this is basically a late 1988,
4 early 1989 time frame -- a 100-year flood event could
5 result in a potential loss of life of about 350 lives. It
6 is estimated that the policy would allow growth during the
7 1989 to '92 period that could increase that by about 29
8 individuals, so that in 1982 we would be looking at a
9 potential loss of life of approximately 380 people.

10 Now, in 1982 the stabilization project would be
11 completed. That project will significantly decrease the
12 potential for loss of life, and that is because with the
13 stabilization project, the potential for a catastrophic
14 levee failure that is unwarned, and thus the city does not
15 have enough time to implement evacuation procedures, we
16 believe that the potential for that is significantly
17 decreased and, thus, that the potential loss of life
18 associated with a flood event, we believe, will
19 significantly decrease. Thus, the 1992 time frame with the
20 stabilization project, we reduce the potential loss of life
21 from 380 down to about 38 people.

22 Now, after 1992, growth is going to continue, and we
23 believe that the growth in the 1992 to '97 period would
24 expose an additional three people to loss of life, so that
25 by 1997 when the 100-year flood protection, as we have

1 assumed, will occur, we would be looking at a potential
2 loss of life of about 42 people.

3 And now I would like to go to property damage
4 information. Again, starting with our existing conditions,
5 the existing amount of development within the flood plain,
6 the 100-year event could result in a total property damage
7 of approximately \$34 billion.

8 The 1989 to 1992 time frame, the growth in there
9 could add up to about \$3.6 billion to that total, so that
10 by 1992 we are at about 37, \$38 billion of damage that
11 could occur from the flood event.

12 From the 1992 to '97 growth, we believe would add
13 approximately \$3.1 billion, so that by 1997 the flood event
14 could result in losses of totaling approximately \$41
15 billion.

16 After 1997 for each additional year that flood
17 protection is not provided, we believe that approximately
18 \$1.2 billion of potential property damage could be -- could
19 occur, and the risk would then increase on an annualized
20 incremental basis by that amount.

21 That really concludes it. I wanted to keep this
22 very brief. And I will allow any questions. That
23 concludes my formal presentation. I would be happy to
24 answer any questions you might have.

25 MR. NOTESTINE: At the beginning of your statement

1 did you say that the General Plan of the city and the
2 county were actually stronger than the proposed policy?

3 MR. BOXER: I am not sure I used the term stronger.
4 The city and county General Plans include policies related
5 to flood hazards, and I am not going to quote off the top
6 of my head. But they essentially say that the city shall
7 not take actions to increase the exposure of people to
8 flood hazard.

9 It is our conclusion that by allowing development to
10 go on within the 100-year flood plain, that this policy is,
11 in fact, not consistent with that General Plan policy.

12 MR. HOLLICK: Kind of a curiosity question. How do
13 you project loss of life? What kind of methodology do you
14 use to come up with those figures?

15 MR. BOXER: It's a difficult task because it's
16 not -- there are not many models out of there, major urban
17 areas, that have been exposed to enormous floods that came
18 about because levees failed. Usually floods are because
19 streams overtop their banks, or something. They are much
20 more localized.

21 We have been working with the Army Corps of
22 Engineers and with the city Flood Control. We have
23 examined inordinate amounts of data to try to make sure
24 that the numbers we are using are reasonable. We have
25 projected the amount of residential growth and the

1 population growth within areas that are under the flood
2 plain. We have applied factors that we have worked out
3 with the Corps to those.

4 What we are looking at in a situation where there is
5 not much warning time, where there is not the potential for
6 significant evacuation, we have assumed a loss of life
7 ratio of about 1 in 220 individuals.

8 With longer warning time, and that's what we are
9 assuming for every part of the city except for the Natomas
10 and the Pocket areas, we are looking at a loss of life of
11 approximately 1 in 10,000.

12 So you see there's a major difference due to the --
13 and that's where the stabilization project comes in. The
14 stabilization project is really intended to decrease the
15 potential for an unexpected failure.

16 The concept is that if there are failures on other
17 parts of the system after the stabilization project, it
18 would be due to an overtopping event of some sort, and that
19 regardless, that there would be -- there would be warning
20 time involved, and that the city and the county evacuation
21 programs could effectively evacuate people.

22 CHAIRPERSON OTTO: Any other questions?

23 MR. NOTESTINE: I still wasn't clear on mine.

24 CHAIRPERSON OTTO: Okay.

25 MR. NOTESTINE: The policy doesn't recommend the

1 changes of the General Plan to eliminate those elements of
2 it, does it?

3 MR. BOXER: Not at this point.

4 MS. WENDT: Why don't I address that.

5 MR. BOXER: I will let Barbara.

6 MS. WENDT: The wording in the General Plan now is
7 general enough that it says it recognizes areas of
8 substantial flood risk, or something -- actually, Tim
9 probably even knows it off the top of his head, and the
10 decision by everyone involved was, yes, at this time it is
11 inconsistent with that General Plan policy, but the
12 language of the A99 flooding designation that we now have
13 for these flood areas within the city is not considered the
14 same type of flood risk that that policy really is intended
15 to address. If I explained that properly.

16 So the solution has been determined to be that the
17 General Plan will be amended to exclude areas designated as
18 A99 from the definition that was intended in that
19 General Plan policy.

20 MR. NOTESTINE: And limit it only to --

21 MS. WENDT: So we are going to say that --

22 MR. NOTESTINE: -- known floodway.

23 MS. WENDT: We are going to say that an A99
24 designation does not fit the meaning of that existing
25 policy; it should not apply to that. But we are going to

1 clarify that and amend the General Plan to make that
2 clarification so that A99 designated flood areas, because
3 they are interim and considered by FEMA to be areas where
4 adequate progress is being made toward achieving 100-year
5 flood protection and, therefore, we, the city, will not
6 consider that to be an area of concern of flooding as it
7 relates to that General Plan policy. Not to say we aren't
8 concerned about flood areas, but as it's defined.

9 MR. NOTESTINE: We are taking actions.

10 MS. WENDT: Right.

11 MS. ROSEN: Can I follow up on that. Then would any
12 other part of the General Plan address the A99 areas? You
13 are basically saying that what you have in the General Plan
14 now, you are going to exempt all the A99 areas from that
15 policy. Are you going to replace it with any other policy?

16 MS. WENDT: That policy will stay in there to say
17 that we will not encourage -- or whatever the wording is --
18 wait, Tim -- there's specific -- why don't you read it.

19 MR. KOBEY: I think what the General Plan says is to
20 not permit areas of development subject to a reasonable
21 risk of flooding. That's it.

22 The question is what's a reasonable risk of
23 flooding. Maybe the A99 zone basically is not subject to
24 an unreasonable risk of flooding given the progress that's
25 being made, stabilization of the levees, that type.

1 MS. WENDT: So that policy will remain in there to
2 say we still won't encourage development in areas with
3 unreasonable risk of flooding, but we will just clarify it
4 to say that an A99 zone is not one of those areas.

5 MS. ROSEN: Okay.

6 CHAIRPERSON OTTO: Any further questions from the
7 Commission?

8 (No response.)

9 CHAIRPERSON OTTO: Open it for public comment.
10 Somebody like to testify on this issue?

11 MS. JENKINS: Chair, Commission, members, thank you
12 very much for the opportunity to testify.

13 My name is Jennifer Jennings; I am the legal affairs
14 director of the Planning and Conservation League. I
15 present my testimony today also on behalf of the
16 Environmental Council of Sacramento, the Mother Lode
17 Chapter of the Sierra Club, and the American River
18 Coalition, along with the Planning and Conservation League.

19 Before I get into the body of my testimony, I would
20 like to comment on the exchange that just occurred. I
21 think the confusion comes from this EIR suggesting as a
7-1 22 mitigation measure that the city's General Plan adopt the
23 fiction that was adopted in the special legislation that
24 went through the Congress; that is, the fiction is that
25 Sacramento has made adequate further progress on reducing

1 flood hazard.

2 The federal act defines adequate further progress --
3 or perhaps it's FEMA's regulations, as the project is
4 100 percent authorized, the construction is 50 percent
5 complete, the protection is 50 percent complete as well.
6 That has not occurred with respect to these levees that
7 pose the highest hazard to the individuals of Sacramento.

8 I will continue with my testimony here.

9 All of the organizations that I am representing
10 today strongly support the work of the city, county and the
11 state and federal agencies in obtaining 100-year flood
12 protection for the Sacramento Area. We also supported the
13 special legislation which delays application of the FEMA,
14 Federal Emergency Management Agency's flood plain maps
15 while a program is put in place to provide the 100-year
16 protection.

17 Our support, and we believe Congress's approval of
18 the legislation, was based on the city and county's
19 commitment to guard against undue exposure to the risk of
20 floods. The proposed land use policy was developed in
21 response to the legislation.

22 After careful review of the description of the
23 proposed policy and its effects as described in the EIR, we
24 regret to say that the policy is neither consistent with
25 the intent of the special legislation nor protective of the

1 community.

2 We believe that the city and the county must delay
3 development in the Natomas and Pocket areas until the
4 levees are, in fact, stabilized. We support accelerated
5 schedule of levee stabilization in order to protect
6 existing residences and reduce the length of delay of new
7 development.

8 After the levees are stabilized, required to
9 reaching the 100-year protection level, we believe that
10 flood insurance should be mandatory. Our position is based
11 on the risk to the public in the Natomas and Pocket areas
12 as described in the EIR policy.

13 The proposed policy essentially ignores the risk to
14 the public. Although the policy in the abstract may appear
15 restrictive, there are so many exemptions and
16 qualifications that the policy has no practical effect.
17 This is admitted in the EIR and in the Sacramento Flood
18 Control Agency documents.

19 In the EIR, on Page 128, it compares the proposed
20 policy to the no-action alternative. It bluntly states,
21 quote:

(Reading) There would be
no essential differences
between the impact of this
alternative, referring to
the no-project alternative,

1 and those described for the
2 proposed land use policy.

3 (end of reading)

4 It goes on, however, to say that:

5 (Reading) It's important to
6 adopt such policy because we
7 committed to Congress that
8 we were going to do
9 something. (end of reading)

10 And we are suggesting that this really does nothing.
11 The proposed policy completely fails to avoid undue
12 exposure to the risk of floods by permitting significant
13 development to occur on vacant land in high flood hazard
14 areas.

15 It is estimated in the EIR that as a result of the
16 implementation of the proposed policy, one of every
17 220 people in the Natomas and Pocket area could die if the
18 levees in those areas were to break during a 100-year
19 flood.

20 We understand from the Corps of Engineers that the
21 potential loss of life in Natomas would remain essentially
22 the same if the levees were to break during flood events
23 that occur more frequently than once every 100 years. The
24 Corps estimates that the Natomas area levees could only
25 withstand a one in 40-year flood event. The risk of a

1 40-year flood event occurring during the next four years is
2 9.6 percent.

3 Therefore, to take Natomas as an example by adopting
4 this policy, the city would be saying that it is acceptable
5 to permit new residents in the Natomas area where they will
6 have a one in 220 risk of dying from a flood event that has
7 a 9.6 percent chance of occurring prior to the levee
8 stabilization. We, frankly, cannot imagine a scenario
9 where a local government would find this level of risk
10 acceptable.

11 The general standard for acceptable risk in air
12 toxics and water quality matters is a one-in-a-million
13 chance of contracting cancer, assuming a lifetime of
14 exposure to the substance. Indeed, the city was sued by a
15 regional water quality control board for permitting levels
16 of Bolero, a rice herbicide, in Sacramento drinking water
17 at a level of risk to far more than one in a million.

18 Because of its location, Sacramento will always be
19 at some risk of flooding; however, the proposed policy
20 entails subjecting new residents to a risk far greater than
21 what the city and county should accept. Adopting this
22 policy would be gambling with people's lives.

23 The provisions in the policy requiring waivers from
24 homeowners indicate that the city is unwilling to bet its
25 treasury on the possibility that a flood will not occur.

1 The fact that the policy also relieves the prior
2 owner of the property of any obligation to indemnify the
3 city and county is an indication that the developers are
4 also not willing to risk their capital.

5 While requiring waivers may shield the city from
6 economic responsibility for flood damages, it does not
7 absolve the city of moral responsibility for permitting new
8 development in advancing protection.

9 The only justification given for taking the risk
10 entailed by the policy is that the policy would minimize
11 disruption to the economic relationships necessary to
12 sustain the high level comprehensive flood protection
13 effort. However, there is no analysis in the EIR that
14 permitting that level of development in a high hazard area
15 is truly necessary to flood protection work.

16 Indeed, the city should consider the economic
17 disruption that would result from a potential flood damage
18 to the development that would be allowed to proceed under
19 the policy. If the Natomas levee were to break prior to
20 stabilization as a result of a 100-year flood, not only
21 would 17 lives be lost, but there would also be
22 \$501 million in damages to structures which are present as
23 a result of the proposed policy. The property damage would
24 not be significantly less in a 40-year flood event.

25 We have a number of other concerns regarding the

7-1
cont.

7-2

1 EIR's description of the policy. First, there is no
2 discussion why the policy will be recommended for
7-3 3 rescission when the levee stabilization contracts are
4 awarded. The fact that the contracts have been awarded
5 does not affect the level of risk that the people within
6 the areas will be exposed to.

7 Second, the city's policy with respect to
8 development agreements does nothing to inform the public of
7-4 9 its proposed actions. The commitment is only to review the
10 entitlement request on a case-by-case basis, yet no
11 criteria is given for the city's decision making.

12 In addition to the flaws of the proposed policy, the
13 EIR itself is flawed. Tonight was the first time I heard
7-5 14 an explanation, you know, in public as to why this is
15 considered a Program EIR. There is nothing within the
16 document itself which explains why it's considered a
17 program EIR.

18 Further, there is no substantiation for the
19 assertion that the policy and its unavoidable adverse
7-6 20 impacts are required to maintain the economic relationships
21 to fund the 100-year flood protection. More evidence on
22 this issue is needed to support a statement of overriding
23 considerations.

24 And I will be submitting written comments later, but
25 I think I need to add one other, a complaint regarding this

7-7 [1 process which, as I just found out today, that they are
2 anticipating a seven-day public review period for the
3 Final EIR. We think that's woefully inadequate when we
4 think this is such an important issue.

5 Thank you very much.

6 CHAIRPERSON OTTO: Questions?

7 (No response.)

8 CHAIRPERSON OTTO: Thank you. Would anybody else
9 like to testify on this issue? We are taking public
10 comments on the EIR. Would anybody else like to make a
11 public comment?

12 (No response.)

13 CHAIRPERSON OTTO: Do I close the public hearing
14 now? What do I do?

15 MR. KOBAY: You can close the public hearing now.
16 The purpose of the hearing was to take public comments.

17 CHAIRPERSON OTTO: And so I don't officially have to
18 close it?

19 MR. KOBAY: No, you don't have to.

20 CHAIRPERSON OTTO: I will anyway. It's closed.
21 That's it.

22 (The public hearing was concluded at 7:25 p.m.)

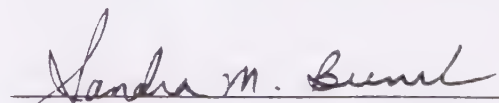
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REPORTER'S CERTIFICATE

This is to certify that I, SANDRA M. BUNCH, am a Hearing Reporter for the State of California, Planning Commission;

That as such I was present at said City of Sacramento Planning Commission, that as such I took down in stenograph shorthand writing on the 26th day of October, 1989, Pages 1 through 30, the proceedings had in the before-mentioned cause, Item No. 32, titled Draft Environmental Impact Report for the Land Use Planning Policy within the 100-Year Flood Plain in the City and County of Sacramento (M89-054) SCH No. 89071707, fully and correctly to the best of my ability; that I thereafter transcribed into longhand typewriting; and the foregoing pages constitute said transcription; that the same is a true and correct transcription of my shorthand writing aforesaid, to the best of my ability.

Dated: October 30, 1989.



SANDRA M. BUNCH, Certified
Shorthand Reporter, No. 3032

LETTER 7

Response to Comment 7-1

Please see response to Comment 6-1.

Response to Comment 7-2

Please see response to Comment 6-16.

Response to Comment 7-3

Please refer to the end of page eight in Appendix A "Proposed Land Use Policy" which reads as follows:

It is anticipated that the construction contracts for the levee reconstruction project will be awarded July 1, 1990 at which time the staff anticipates recommending that the City Council and Board of Supervisors rescind these policies. At that time, the City Council and Board of Supervisors will determine if the flood risk is acceptable for their respective jurisdictions.

At this point it is anticipated, per the above statement from the Proposed Land Use Policy text, that the policy would be rescinded at the time the construction contracts for levee reconstruction are awarded. However, the City Council and Board of Supervisors could choose to extend the Policy's effective dates.

Response to Comment 7-4

Please see response to Comment 6-1.

Response to Comment 7-5

The Draft EIR, in Chapter 5.1 "Introduction to the Analysis," states that the EIR is being prepared "as a 'Program EIR' pursuant to Section 15168 of the CEQA Guidelines." The language in the DEIR goes on to state:

This EIR is intended to serve as a "Program EIR" addressing the risk of flooding to which people or property will be exposed in connection with each project subsequently undertaken in the City or the County. Accordingly, this EIR is designed to supplement the project-specific environmental documentation which may be required for each future project. In those environmental documents, project-specific analyses related to the issues listed above will be included for determination as to significance of impacts.

Response to Comment 7-6

Please see response to Comment 6-16.

Response to Comment 7-7

CEQA Section 15089 states as follows:

. . . This Section specifies that agencies need not provide a separate review period for the final EIR . . . In order to save time, the CEQA process provides only a once-around review system. It requires public review only at the Draft EIR stage. The Final EIR can be submitted directly to the decision-making body of an agency for consideration.

BOD Meeting

1

October 26, 1989

We're here to receive public comments on the draft Environmental Impact Report (EIR) and the Land Use Planning Policy on the 100-Year Flood Plan for the City and County of Sacramento. Before the Board opens the meeting for public comments we'd like to review three general topic areas related to the EIR.

First, I'd like to review some of the background and the key events and actions that have lead to the development of the proposed land use policy, Bill has touched on some of those but I'd like to go through that again and the subsequent draft EIR policy and I'd like to outline the remaining steps that are required under the California Environmental Quality Act and clarify the purpose and format of today's meeting and finally Brian boxer will highlight the major issues and impacts that were highlighted in the draft EIR.

In November of 1988 the Army Core of Engineers came up by the City and County with the draft updated flood map of the Sacramento area. The map showed the majority of the city as located in the 100-year flood plain. In response Congress gave the City and County four years to make adequate progress towards improving the level of flood protection prior to designating the new maps as official. A comprehensive multi-agency effort has resulted in plans for future flood protection programs that would require some

combination of three major elements to achieve 100 year flood protection in sacramento region and we've had some interesting detail today about these efforts. The first is levee stabilization and then also additional upstream storage or levee improvements. these efforts will require separate environmental review procedures by the appropriate agency and some of those have been talked about here today already the legislation that authorized the four year extension also requires the city and county to develop an appropriate land use policy to regulate some new development within the 100 year flood plan. This advisory body, in a slightly different form, was then first established as the Sacramento Metropolitan Task Force to respond to the requirements of the legislation. A major goal of the task force was to develop a city/county policy on growth within a 100 year flood plan. On april 27 the task force recommended approval of a draft policy, the policy contains really three major components. It provides interim growth guidelines for some areas within the flood plain. It defines building standards for non-residential structures within the flood prone areas and it requires property owners and developers to sign liability and waiver forms prior to construction. A little more specifically, it states that you would identify flood prone areas associated with the Sacramento River pose the greatest flood threat, and flood policy building restrictions apply only to those areas. it says that residential projects that require discretionary entitlements and if you filed

after april 1 1989 may proceed through the planning process but will not be granted a building permit unless the project can be built to conform with flood building standards. It says that building restrictions in newly identified flood prone areas will be lifted when contracts with levee stabilization work are awarded. That's anticipated to be June 1990, or when the city counsel and board of supervisors should determine it is reasonable to allow building to proceed. It also says that the city will not designate any new flood prone land for urban use beyond what is shown in the general plan. It also says that property owners within the newly identified flood prone area who are permitted to proceed with construction must sign a notice and waiver form. The waiver will state that the property owner is aware of the risk of flooding and assumes the liability in the event the property owner is also required to notify any future owners of that potential flood threat. On June 7th of this year the policy was presented to the city councils of sacramento. the councils separated a legal notice and waiver portion of the policy and requested that a environmental impact be prepared on the remainder of the policy components. The City of Sacramento was identified as the leading agency it was determined that the EIR would take the form of program eir that would provide the environmental analysis necessary to allow the decision makers to approve previously contemplated growth in a region as a special legislation had indicated it was appropriate. the draft eir was released on sept 18 of this year for a 45 day

public review period. we mailed the draft eir to over 250 agencies and interested parties. The draft EIR addresses the risks of life and property associated with exposing the implement of new development in question to the 100 year flood. The draft EIR does not address the notification requirements component or any of the future flood protection efforts. There are several steps that still remain in the process connected with the EIR prior to project approval. November 1st will be the end of the 45 day public review period. On December 8th it's anticipated that the final eir will be released. The final eir will include all of those responses to the comments we've received on the draft eir. On December 19th it is anticipated that the final eir will be certified by the City Council. After that the policy can be adopted by both the City and County. Currently, it is anticipated that the policy will be adopted by the City on December 19th when the final eir is certified. There will also be another public hearing tonight at the City Planning Commission that will start at 5:30. And, as Bill said, our purpose today is really to receive comments from the public. We don't expect to immediately resolve any issues that may be raised here today but the oral comments that we receive today combined with the written comments that we received during the review period will be carefully evaluated and any formal written responses, as I said, will be prepared and included within the final EIR. And so that we can respond completely to all comments we do ask that anyone who wishes to comment fill out the little

blue forms saying who you are and who you represent, if that's appropriate, and we will be taping all the comments today and those will be transcribed and passed on to the city, people involved, and the consulting firms, so they can accurately understand what was said. With that I will turn over to Brian Boxer from EIP who will talk a little bit about the highlights of the draft eir.

Good afternoon, everybody. My name is Brian Boxer. I'm with EIP Associates and we were lead consulting firm working with the City in the preparation of the Draft EIR that you have before you today. What I'd like to do is very briefly step through with you what you'll find in that document and then, equally briefly, step through the conclusions that we have come to in Draft EIR.

You will find at the beginning of the document an introduction, a summary of the DEIR, as well as a detailed description of the projects which requirements will be described for you today. We have included in the DEIR a rather detailed kind of description of the setting that this policy is placed within and there we have described information relating to the hydrology of the American and Sacramento River systems, the history of flooding in the Sacramento area, and flood control in the Sacramento area and responses to recent flood events, and that's both from a regulatory perspective and from a legislative perspective, and we have described, in a

typical fashion, types of hazards that are associated with flooding.

In the environmental impact analysis, you'll find that we have evaluated three general issue areas, the first being the relationship of this policy to other plans and policies of the city and county, as well as, at the state and federal levels. We have also analyzed the land use aspects of this policy, looking at how much growth would be allowed by the flood policy comparing it with the amount of growth that might be expected without the policy. We're looking at that in terms of both residential growth, and in terms of population, as well as non-residential growth in terms of the amount of square footage of development that we would expect. And then, finally, we evaluated deepest flood hazards in terms of potential loss of life and potential damage to property that could be expected from flood.

Additionally, in the DEIR you'll find an analysis of the cumulative impacts of this policy, and then, after that is the area of the EIR where we looked at comparing the relative amount of increased risk associated with the policy compared to the amount of risk that is associated with the existing development within the flood prone areas today.

We've also analyzed three alternatives to the project, the first

being a "no project" alternative that is required under the California Environmental Quality Act. We've secondly looked at an alternative that involved the implementation of the 1989 working maps that were issued by the Core in relation to the City and County's existing floodplain management regulations. In the third alternative we looked at the application of those 1989 working maps just for residential development. So we looked at those three alternatives in addition to the policy itself.

I'd like to briefly step through our findings in these three areas. The first, in terms of plans and policies. We have identified that the policy as it stands today, is not consistent with certain aspects of both the City General Plan and the County General Plan, that being, the policies in both of those plans related to the exposure of people and property to flood hazards. We have identified litigation for this impact related to either amendment of the proposed policy to decrease potential exposure or amendment of those general plans to account for proposed policy. In terms of land use we have identified two different types of impacts neither of which we have identified with significant effects but I think they're important and I'd like to raise them with you today the first is that we identify for the policy will not measure the decrease in development that would be expected in the flood plain areas both in terms of population growth and non-residential development that would be projected and would not measurably

decrease during that development beyond that would be projected to occur between now and the year 1997 which we used as our _____ year without the policy we don't believe it will measurably change. Secondly we've identified that the policy will eliminate the potential for annexations over all increases in urbanization within both the city and county flood prone areas. this could be acting as a beneficial effect in as it will not allow unforeseen conversions of agricultural land that could happen without the policy. Now I'd like to go on and discuss the immediate document that is our assessment of flood hazards. In the section we looked at the potential risk of loss of life and property damage which could be associated with a .100 year flood event and assessed the additional risk that would be associated with growth that would be allowed under this policy now the risk that is associated with a flood involves the relationship of several factors. First being _____ population that is exposed, Secondly, the potential likelihood of an event occurring and thirdly, the amount of time that that exposure is allowed to go on. We've analyzed three difference scenarios, three different time periods in the future. The first being from the present to the year 1992, this is the time period of which the stabilization project will be going on, it was assumed in this analysis that by 1992 the stabilization project will be completed. During this time period it is assumed that there is 40 year protection in the Natomas area, 63 year protection in the remainder of the community within the flood plain area. We then

looked at the 1992 period to the 1997 period. It is assumed that during the period the stabilization project has in fact been completed but that additional measures to get the community to 100 year flood protection has not yet been completed. During that time period it's assumed that Natomas would have approximately 50 year protection and that the remainder of the community would have 63 year protection. At the end of that period we have assumed that a combination of additional upstream storage and/or other levee improvements further on down the system will provide the community with 100 year flood protection. There is of course the potential that by 1997 these will all not be in place so in order to account for that we have looked at it at an incremental point of view the additional risk associated with delay in the placement of 100 year flood protection beyond the year 1997. So you'll find the three periods 1989-1992, 1992-1997, and the beyond 1997 periods evaluated in the document.

What I'd like to do now is very briefly step through with you the final conclusions accentuated this analysis in terms of potential loss of life and potential property damage. We first evaluated existing conditions, what could happen if there was a flood event under existing conditions, looking at the entire community we have concluded that there is a possibility of a loss of up to 350 lives, with existing amounts of development from a 100 year flood event. Now with the development that could occur between now and 1992,

under the policy, throughout the community there is a potential for a loss of an additional 29 lives which is an increase of about 8% under the policy. What happens then is that numbers will drop dramatically between the pre 1992 and the post 1992 assessment, that being because of the implementation of the stabilization project under our analysis decreases the potential for a catastrophic levee failure that would result without warning, with warning it is assumed that there is evacuation procedures would be much more successful. After 1992, with stabilization the potential loss of life in the community decreases from 380 to about 38 throughout the entire community. We then looked at the amount of growth during the '92-'97 period and concluded that the loss of live would increase by 3 individuals to about 41 or 42 by 1997.

I'd like to turn my attention to property damage during the same time periods. Under the existing conditions our analysis shows the potential of about 34 billion dollars in damage from a flood event in the community with existing development. The growth that will occur between 1989-1992 will add 3.6 billion dollars to that total so that by 1992 we would be looking at a total of about 37 billion dollars. The growth that could occur between 1992 and 1997 we believe would add about 3.1 billion dollars to that total so that our 1997 grand total of about 40 billion dollars of damage that could occur from a 100 year flood event that would result in levee failure throughout the city. We then looked additionally at the

increment of growth that would occur after 1997 on an annual basis looking at every year that flood protection is not provided after 1997 and the annual increment there is about 1.2 billion dollars worth of damage for every year that flood protection is not provided.

That concludes my presentation. I think we'll turn it back over to Barbara to representation and we'll certainly be happy to answer any questions that you have.

We, and Brian certainly welcome any comments that you might have and we're happy to answer those and then we would as you to turn the meeting over to receive public comments from legislative issues.

I have just a comment, I don't want to be nitpicky, but nothing appears in the back showing the scenarios for the various floods, how those were picked and a _____ coming out. I don't think were addressed from my viewpoint. Back to the ____ location. I just was wondering what criteria you used and who designed on that the scenarios was different because of 1986 those places were mentioned.

We work with both the core and city flood control county flood control. in working with their staffs using the scenarios that

they have been developing both for the core for their internal studies and the city for their time ideation studies on evacuation planning in the city. And we relied on and worked consistent with the work they were doing and believe that we are so.

I've seen them before. I don't think the public can take those as an actuality their close enough, but I just want to make the point that this is not necessarily where the levee portraits.

Its a difficult thing to predict and I think it should be as much a prediction as a projection of what could occur.

Any other questions?

No response.

Intro for Jennifer Jennings.

Good afternoon chairmembers of the agency I appreciate the opportunity to comment today, my name is Jennifer Jennings and I am the Legal Affairs Director of the Planning and Conservation League. My comments today are also supported by the ____ Council of Sacramento, the motherlode chapter of the CR club, the American River Coalition and the Planning and Conservation League. All of the organizations that I am representing today strongly support the

work of the the City, County, State and Federal agencies that worked to obtain the 100-year flood protection for the Sacramento area. We also supported the special legislation which delays application of the Federal Emergency Management agencies flood plain maps while a program was put in place to provide the area with a 100-year flood protection. Our support and we believe congresses approval, of that legislation was based on the city's and county's commitment to guard against undue exposure to the risk of floods. The proposed land use planning policy was developed in response to legislation. After careful review of the description of the proposed land use policy and its effects as described in the eir we regret to say that the policy is neither consistent with the intent of the legislation nor protective of the community. We believe instead that the city and county must delay development in the Natomas and Pocket areas until the levees are stabilized. We support accelerating the schedule levees stabilization in order to protect existing residents and to reduce the delay on new development. After the levees are stabilized and prior to reaching the 100-year flood protection level we believe that flood insurance should be mandatory. Our position is clearly based on the risk to the public and particularly in the natomas and pocket areas as described in the eir your reviewing today. the proposed policy ignores the risk to the public, although the policy in abstract my appear to be restrictive there are so many exemptions and qualifications that the policy has no practical effect. This

8-1

8-1
cont.

is admitted in the EIR in the comparison of the proposed policy with the no project alternative (i.e., the situation in which the city and county did not adopt a policy), on page 128 of the eir is bluntly stated, quote, "there would be no essential differences between impacts of this alternative (no project alternative) and those described the proposed land use policy." So in essence we question the adoption of a policy which would have no effect on the risk level in which people would be subject. The proposed policy completely fails to avoid undue exposure to the risk of flood by permitting significant development to occur on vacant land and high flood hazard areas. It's estimated in the eir that as a result of implementation of the proposed policy, 1 of every 220 people in the Natomos and pocket area could die if the levees in those areas were to break during a 100- year flood event. we understand from the Core of Engineers that the possible loss of life in the natomos area would remain essentially the same if the levees were to break during flood events which occurred more frequently than every 100 years. The Core also estimates that the Natomos area levees could only withstand a 1 in 40 year flood event. The risk of a 4 year flood event occurring within the next 4 years is 9.6%. Therefore, to take Natomas as an example, by adopting this policy and city and county would sustain that it is acceptable to permit new residents in the Natomas area where they would have a 1 and 220 risk of dying from a flood event that has a 9.6% chance of occurring during the 4 years prior to the

8-1
cont.

stabilization. We frankly cannot imagine a scenario where a local government would find this level of risk acceptable. The general standard for acceptable risk in a toxic and water quality matters is 1 in a million chance of contact with cancer assuming a lifetime of exposure to the substance. Indeed, the City of Sacramento's Regional Water Quality Control Board were permitting levels of a rise to riverside bolero in sacramento's drinking water at a level which subject its citizens to a risk far less that 1 in a million. Because of its location Sacramento will always be at some risk of flooding; however, the proposed policy entails subjecting residents to a risk far greater than what the city and county should except. Adopting this policy would be gambling with peoples lives. The provisions in the policy requiring waivers from homeowners indicate that the city and county is unwilling to bet its treasury on the possibility that a flood will not occur, the fact that the policy also relieves the prior owner of the property of any obligation to identify the city and county is an indication that the developers are not willing to risk there capital. While requiring waivers may shield the city and county from economic responsibility for flood damages it does not absolve the city and county's moral responsibility by permitting new development in advance of protection. The only justification given in taking the risk entailed by the policy is that the policy would minimize disruption to the economic relationships necessary to sustain the high level

8-2 of flood protection efforts. however, the eir is devoid of any

8-2
cont.

analysis that permitting that level of development in a high hazard area is truly necessary to fund flood protection work. Indeed, the city and county should consider the economic disruption which would result in potential flood damage to the development that would be allowed to proceed under the policy. If the Natomas flood levee

8-3

where to break prior to the stabilization as a result of a 100-year flood, not only would 17 lives be lost but there would also be \$501 million in damages to structures which are present as a result of the proposed policy. The property damage would not be significantly less if it was a 40 year flood event. In addition to the commitment to avoid undue exposure to the risk of a flood the city and county also gave assurances to congress that it would not designate any increases in urbanization beyond the general plan as it existed at the time of passage of legislation. Under the proposed policy the county's commitment is reduced to one that can compile with the county's pending general plan update which is not scheduled for completion until 1991. a commitment to comply with the general plan adopted is meaningless and is a breach of faith with congress and the community. We have a number of other

8-4

concerns regarding the eir's description of policy. First there was no discussion why the policy will be recommended for rescission when the levee stabilization contracts are awarded. The fact that the contracts have been awarded does not effect the level of risk that the people within the areas will be exposed to. Second the

8-5

city's policy with respect to development agreements does nothing

8-5 cont. to inform the public of its proposed action. the commitment is only to review the entitlement request on a case by case basis yet no criteria is given for the city's decision making. In addition to the flaws of the proposed policy the eir itself is fine. The 8-6 eir is designated in quote "program eir" if there is no description of the program. Further there is not substantiation for the exertion that the policy is unavoidable address impacts are required to maintain economic relationships defined in the 100-year flood protection. More evidence on this issue is needed to support a statement of overall considerations. This is essentially the 8-7 beginning of our analysis of the eir we have been involved with Mr. Edgar and others on trying to reach a consensus on flood control in Sacramento, and we worked with him on levee reconstruction contract and the environmental assessment which, frankly, needed a lot of improvement, but we support levee stabilization. We understand the risk to which existing residents are placed, we do not understand placing new residents at that risk. Thank you. Any Questions?

Did you offer any comments earlier this year when this policy was being made?

We did not because in part we had no idea that the policy had been chipped away so much that it really means development as it would proceed without the policy. Additionally, we have

I'm not quite sure I understand the course of the development of either at the initial stage that you or the board of urbanization interprets that accomplished on policy?

I'm not sure about all the organizations, I'm not sure of that, but frankly I don't think that that should change the message of these organizations because were saying that we had no idea that the level of risk would be so high and frankly we don't have detailed knowledge of what the city's and county's development plans are, such that we could analyze how many people were going to be effected and what the risk would be to those people.

So don't of course vocal debate of this policy which is to analyze this document. You folks were not involved in the debate around the policy construction itself?

No, we didn't have the information, as I said, to make comments in detail as we have now with the eir providing this information. I'm not sure does that mean we have any less of an interest or right to comment on that now I'm not sure what the. I mean, essentially I guess what i'm asking is as the successor agency to the task force that you might consider going back and saying we really need to restrict rules now that we have the information provided in this EIR we need to look at and revise the policy

would it be more appropriate for the two pair of eyes for whom the policy is directed i guess. the policy directed to the city counsel of sacramento who had once who would adopt the proposed policy or who would potentially adopt the policy of low development hide moratoria. Wouldn't nothing more appropriate for those two bodies to make a decision on any official policy questions?

No i thought you were the successor agency to the task force. this was a task force developed policy you know a lot of the same members I would think

Based upon the appropriateness of where the thrust of your comments ought to be executed or responded to concretely from policy standpoint whether or not it is more appropriate at the levels of city counsel verses us. After all they are the ones who have to authorize any development

Yes, but your the flood planning agency, isn't that true?

I understand we're the flood planning agency but by the terms of this policy we don't authorize nor do we control the managers decision of these two bodies.

I recognize that.

I'm unclear as to what are policy is, how we've eroded, in my mind it is not over, now what is the difference between what we've promised congress and what were doing today. She says were chipping away, please show me where that exists because we made a commitment before and we've stood by that on several planning decisions with the board of supervisors, where is this discrepancy here that were chipping away at this policy and it looks like we are going to develop like mad all over the place?

I think supervisors feel it's important to understand that different people can read this policy and view it whether it's restrictive or not. I happen to think that the mission of most of this is to, in our goal, is to get flood protection as quickly as possible when we went through these hearings last summer question was posed how do we do that? one alternative is of course is what Ms. Jennings is proposing and that is a very restrictive policy on land use control in its ultimate form is moratorious was the consideration of a predecessor agency as well as a number of people that what we wanted to do was recommend the balance between a moratorium and a laissez faire approach to land use policy in the county and thats what we think we have affected to do now other

people of course disagree with that but we think we have maintained a reasonable balance. That's of course debatable but we think we, have simply because the legislature requires us to do nothing. Legislation does not require us to anything but be very concerned about this issue and to take all of our land use decisions very seriously

And to move ahead full pace would not rectify any problems, which I think we have done

Right, so we have proceeded with more than nothing we have implemented at both city and county notices and waivers which were contemplated by the legislation and which we have done and which we in terms of are committed to congress. there is some restrictions those entitlements issued after april 1 will not get building permits they will be delayed so there is some restrictions. we aren't required by the legislation to do that and I think quite frankly our main efforts have been directed to getting flood protection as quickly as possible that's what we want to do to issue a moratorium to limit growth in a very restrictive way we think disturbs our efforts to do that because what it does is disrupt very infragment various groups community toward our main objective which is to get concerted, agreed upon flood control for the county. It is balance. some people will say its not proper balance but it is balance its not a do nothing policy but as i say.

In terms of the existing situation right now what is the population exposure in the Natomas and Pocket areas currently?

Population in the Natomos area were are showing approximately 30,000 and in the Pocket area at 40,000. The remaining part of the flood plain approximately 300,000 for a total of approximately 365,000 people within the flood plain. That's as of end of 1988, beginning of 1989.

Now in terms of the scenario between now and 1992, I believe that is when the stabilization is supposed to be finished, what is the growth in those areas in terms of population?

In the Natomos area it is projected to increase 4,000 people. Pocket area 2,000 people. Other areas approximately 21,000 people, for a total growth of about 27,000 approximately.

That assumes full policy?

That assumes with the policy.

So, the 21,000 is not Natomas area?

The 21,000 is expected growth in other parts of the flood plain

areas not including the Natomas and Pocket areas. That includes city and county.

I'd like to respond to Supervisor Smoleys question. Saying that this policy does something which we would like to hope would do is contradictive by both the eir and the transmittal that you are differed by Mr. Edgar and his staff. It says on the page right before the schedule the impacts of the no project alternative are similar to the proposed land use policy. I think that if nothing else this eir and analysis must be much clearer to tell the public that something is being done to protect new residents.

So bottom line, are you saying that what you want is a moratorium, is that the issue?

I'm saying that given the risk of 1 of 220 in the Natomas area where their is a 10% chance of a flood occurring in the next 4 years, well 9.6% chance in the next 4 years. I and the groups believe that is the correct and right thing for the policy to reflect. Until levee stabilization is complete we understand at that point the public would have much stronger warning.

So the difference based upon your approach in essence in the Natomas area minimizing the roughly 4,000 people who would be

exposed during that period.

Right, because I assume that you assure that the city and county were not aware of that level of risk when those developments were approved. Additionally, the level of risk was not known at the time when the special legislation was passed. And I want to point out

I want to point out the _ is on a hill we point out that numbers of people currently exposed. those are the basis of our initial concern, I assume your too and both the admit that the additional environmental exposure certainly is important. but _ from _ standpoint I believe the 30,000 population exposure _____. 30,000 people versus 6,000 people but when you look at the question of total concern, clearly is more focused on both 70,000 and those areas that would potentially suffer levee failures without warning (i.e., Natomas and Pocket areas). It seems to me that it was on that basis that we approached congress for the language that granted we did not know about the additional 6,000 potential people exposed with the policy for example laissez faire but we certainly were concerned with the vast numbers of people who would be exposed, in fact we used the figure of 320,000 people at that time . I guess I have a hard time understanding where your relative to addressing the exposed people that exists right

now.

We are supporting an acceleration of levee stabilization based on figures that this EIR indicates. The risk to which they are exposed. We have like I said . . . (end of tape)

(beginning of new tape) . . . and we're also saying that the County and the City would be ill advised at best to put new people out there to risk. It was not known at the time when the special legislation was passed that those were 40-year levees in the Natomas area, and when the City and County made their commitments to Congress, the general plans were considered the outside parameters for development in those areas. Not, not, not as though those were the starting point and that the County could go ahead and amend its general plan and further increase the number of people that were...

...First of all, on that point I'd definitely have to differ with your group's presentation, the economist was in fact, the existing general plan was in place and was being updated and we understood that it would be updated and completed part of 1992, that was understood and confirmed, but we made a commitment that while we would be back, that we would not urbanize beyond the existing general plan, and the original

plan would not be an amended document until early into 1991, and we understood at that time, and I think, representatives of Congress, at that time, and further more at that time the lawyer made clear in terms of his commitment not to be responsible in terms of exposing additional people over and above those who a.. a.. to those persons exposed to a.. a.. a failure. I guess, I guess I see it differently, that I think it certainly possible for those things, and in that sense I think it's right. One can look at a policy and one can interpret it as something different. I disagree with the implications that appeared in nationwide media, in its interpretation, I don't think so. I think the debate we have here is an honest one.

Well, the Congressional legislation refers to the existing general plans of the city and county, not the County's pending general planned update. Regardless of what Congress thought at the time when it gave Sacramento the four-year breathing space, I think that the numbers on the people just should a.. merit a reevaluation of the a.. of the policy proposed.

O.K. Are there any other questions on the understanding of this policy?

8-8 I.. I.. I have..._____that number one I said I nitpick with

8-8
cont.

their scenerio. I also nitpick a little about their estimates, I mean, if that goes correctly, I have only lived there for 65 years and so I should have been flooded once. And again, I just bought another house and that has nothing to do with a thing. I have to remind me that I think all of these agencies take a worst case scenario, and I don't think there's any place in the United States that you can live and not put yourself at risk _____. I'd much rather live in Natomas than in San Francisco.

Are there some more questions? Is there anyone else who wishes to speak?

Well, we don't have any more.....

Is there anyone else who wishes to address, address the Board on this matter? Please feel free to do so until the forum comes to order. ...O.K. ...I see the _____ came forward. Does that include the a...you want this for the public record? Yes. You want us to a... conclude the testimony, the testimony received today... and you'll take these comments... and you'll respond to them when?

We will respond to them within the final EIR which will be available in early December.

O.K.

And what's the time line of that. The final will be released, I believe it's December 8th.

Right. ...on the 6th, I believe, right?

No, it's December 8 that the final EIR will be released. There will be a seven day public review of that document, and then on December 19 the EIR will be certified by the City Council. That will be another public hearing and if there are people who want to make comment, they can do so at that time, as well.

O.K.

Bill Edgar: Audrey, at what time would this come before the...It comes before the City Council on the 19th, but what time would it come before the Board of Supervisors?

Audrey: I don't that the date has been set for that.

The 20th.

I don't think there is... I'll see what's the_____

We will work with the Clerk _____ and make sure that the policy gets up sometime around that time.

Thank you.

O.K. Is there a motion to close _____?

I'll move.

Second.

O.K. Roll Call.

Sandy Smoley?

Yes.

Mike Eaton?

Abstain.

Jim Streng?

Aye

Toby Johnson?

Yes

Ann Rudin?

Ila Ferris?

Yes

Bill Cristofel?

("Not here, too.")

Manuel Verandes?

(no response)

Fred Steinkamp?

"Correct" (?)

Jess Nickless?

Aye

Barbara LeVake

"Aye" (?)

Grantland Johnson:

Aye

**LETTER 8**

Response to Comment 8-1

Please see response to Comment 6-1

Response to Comment 8-2

Please see response to Comment 6-16.

Response to Comment 8-3

Please see response to Comment 6-1.

Response to Comment 8-4

Please see response to Comment 7-3.

Response to Comment 8-5

Please see response to Comment 6-1.

Response to Comment 8-6

Please see response to Comment 7-5.

Response to Comment 8-7

Please see response to Comment 6-16.

Response to Comment 8-8

Table 10 on page 99 represents the percent likelihood of various flood events occurring in any given year. For example, a 40-year flood event is not defined as occurring once every 40 years, but as having a 2.5 percent change of occurring in any given year.

A worst case scenario is used in evaluating the risk associated with a 100-year flood. Floods of lesser magnitude would have impacts something less than, but potentially as great as, those of a 100-year flood. Please refer to paragraphs four and five on page 97 for further discussion.

